UNIVERSITY
OF MICHIGAN
JUL 13 1955
MUSIC
LIBRARY

ORGAN INSTITUTE QUARTERLY

VOLUME 5 NUMBER 3 SUMMER 1955

HOMER G. MOWE 8

T. CARL WHITMER 11

FRANZ HERRENSCHWAND 15

A. S. BACH 23

W. L. SUMNER 27

EIVIND GROVEN 34

ANDOVER MASSACHUSETTS

AEOLIAN SKINNER ORGAN COMPANY, INC.

President
G. DONALD HARRISON

Vice President
WILLIAM E. ZEUCH

Vice President
JOSEPH S. WHITEFORD

Office and Factory
BOSTON 25, MASSACHUSETTS

Peabody Conservatory
College Of Music

Baltimore 2, Maryland

REGINALD STEWART, Director

Organ Faculty — **PAUL CALLAWAY**
ARTHUR HOWES

The Peabody Conservatory is pleased to announce the appointment to the faculty of ARTHUR HOWES. Mr. Howes and PAUL CALLAWAY will instruct organ students enrolled in courses leading to the **Artist's Diploma, Teacher's Certificate,** and **Bachelor of Music** and **Master of Music** degrees.

Mr. Howes will assume chairmanship of the graduate department of Sacred Music organized by the late Richard Ross. Its curriculum includes advanced studies in organ, choral conducting, voice, choral and organ literature, organ design and construction, religion, liturgy, and related subjects. The course of study, designed to insure thorough knowledge of every area of church musicianship, will give students opportunity to direct and play under faculty supervision at one of Baltimore's leading churches.

For Catalogs and Information:

The Registrar: **23 East Mt. Vernon Place**

Craftsmanship

The REASON
For
REISNER

The unmatched quality of the Reisner craftsmen is clearly reflected in every striking detail of this Reisner Three Manual Draw Knob Console. Designed to complement the interior of a large church in historic New Orleans, this console will not only add to the traditional classic beauty of the church, but will bring the full resources of the organ to the organists' fingertips. The hand carved, hand finished exterior of the console is an example of craftsmanship found only in Reisner consoles, whether traditional or modern in design. The all-electric action, built only by Reisner, assures positive operation and immediate response. Reisner craftsmanship leads the organ industry in producing superior products designed for lasting beauty, ease of installation, comfort and superior playability.

THE W. H. Reisner MFG. COMPANY, INC.
HAGERSTOWN, MARYLAND

ORGAN INSTITUTE

1956 ENGAGEMENT CALENDAR

Organs of the World

★

Fifty-two beautifully reproduced pictures of unusual organ cases and consoles, many showing church interiors, with ample space for entering each day's engagements.

An ideal Christmas gift for clergy, choir members, professional colleagues and all musical people.

In gift box showing cover picture on lid, postpaid $1.85 each, one dozen, $18.50.

Inquiries are invited from music dealers, book stores and stationers interested in exclusive distribution rights in own area.

Orders accepted now for September delivery.

Box 50 **Andover, Massachusetts**

THE ORGOBLO

at Rochester, Minnesota

This Reuter organ in the First Presbyterian Church of Rochester, Minnesota is powered by a Spencer 5 horsepower Orgoblo.

To get the utmost in performance from your organ and your organist, be sure it's an Orgoblo.

The Orgoblo is like an enclosed fan. Light-weight impellers are mounted on an oversized motor shaft which has only two bearings. There are no belts or gears. It's all steel, compact and requires no special foundation. Operates efficiently at all loads without vibration or disturbing noise.

Wide clearances, low peripheral speeds, extra large shafts, and built like a bridge—with all metal, rust resistant and reinforced construction—the Orgoblo gives satisfactory service for a lifetime. **Ask for the bulletins.**

504-B

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER
HARTFORD

Organ Institute Quarterly Volume 5, Number 3, Summer 1955.
EDITOR: Arthur Howes
EDITORIAL BOARD: E. Power Biggs, Archibald T. Davison, Rowland W. Dunham, Rudolph Elie, Edward B. Gammons, Ralph Kirkpatrick, Edwin McArthur, Robert Noehren, Wilfrid Pelletier, Arthur Poister, Carl Weinrich, Ernest White. Published four times yearly — winter, spring, summer, autumn — by the Organ Institute at 104 Salem Street, Andover, Massachusetts. Price 50 cents a copy, annual subscription $2.00. Three year's subscription $5.00. Outside of the United States, $2.16 for one year, $5.48 for three years.

(Entered as second class matter at Andover, Massachusetts)

The line printed in italics above is important to both advertisers and subscribers. Second-class bulk-mailing privileges are only granted to publications containing advertising when they have a *bona fide* list of subscribers. Various choral and organ publications claiming large circulation but not showing this notice, which the Post Office Department regulations require of all second-class-privileged publications, are given away, and hence most probably thrown away.

★ ★ ★ EDITORIAL BRIEFS ★ ★ ★

HOMER MOWE HAS CONTRIBUTED AN ARTICLE FOR THIS ISSUE (JOYFUL NOISE) presenting the broadest and clearest perspective of the entire subject of voice development that we have seen in print. His return to the Organ Institute this summer will again afford a truly exceptional opportunity for study in this field. His course has been planned in such a way that it will be of the greatest possible value to organists and choirmasters.

T CARL WHITMER AGAIN PENETRATES AN OBSCURE AREA OF MUSICAL DEVELOPMENT (as he did in "Invitation to Improvisation," ORGAN INSTITUTE QUARTERLY, Volume 2, Number 4), one that has been generally considered closed to some aspiring musicians. In corroboration of Mr. Whitmer's main thesis in this present article, the editor has long felt that of all the other arts drama is the most nearly akin to music. A good actor knows that each accent and inflection, even the slightest change in the intensity, pitch, or quality of his voice, can contribute to (or perhaps detract from) the effect of his acting. Change of pace and timing are of the essence. It is taken for granted that he will rehearse his lines first in one way and then another, experimenting until he discovers the best way to express the dramatic values of his role. Mr. Whitmer suggests that we should practice in somewhat the same way.

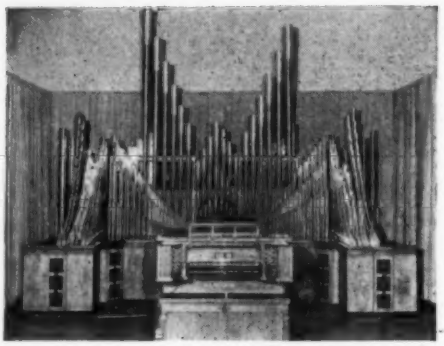
MARGARET MIDELFORT'S TRANSLATION OF EIVIND GROVEN'S ARTICLE presents convincing arguments in support of an improved system of tuning. There is the strongest reason for working toward the development of an untempered organ, because in our instrument there is obvious conflict between the naturally tuned quints and tierces in mixtures and mutations and the corresponding notes of the tempered scale, which are sounded simultaneously by the 8′ rank in any chords containing an interval of a twelfth or a seventeenth. To be sure, we are so accustomed to this sound that we are scarcely aware of its defects, and this may also be true of our audiences. *But*, the truly beautiful sound of perfectly tuned intervals throughout the scale *might* make the organ a more popular instrument.

Three different pitches for each note of the keyboard, which Mr. Groven recommends, would mean that an ordinary manual stop would have 183 pipes, a III Mixture, 549. Difficult and expensive as this would be, a collateral benefit would be that monster organs of 100 stops or more would become impossible.

The action, with its automatic replacement "shifts" in accordance with key and harmony requirements, must be complicated. We understand that it is similar to a telephone dial switching system, and have asked for details of it.

The firm of Pels, in Holland, has built an organ with untempered intervals in all keys and an ingenious console. We will publish an account of it, with pictures, in an early issue.

ANOTHER FINE ENGLISH ORGAN PERIODICAL, THE *Quarterly Record of the Incorporated Association of Organists*, has published a few lines to enlighten us about the significance of "Hon." In the April 1955 issue Stainton deB. Taylor, after objecting to Cecil Clutton's criticism of Dr. Harold Darke, defends



Traditionally Faithful . . .

in Tone and Touch

The One and Only

Wicks **Organ**

Even the smallest part of your Wicks organ is fashioned with care by proud hand craftsmen who follow an ancient tradition. Tonal and mechanical perfection are assured with Wicks' exclusive *direct electric* action.

Nothing can interpret the spiritual beauty of your church service like the music of a great pipe organ. And no church need be without it, for Wicks provides the finest pipe organs in just about every price range. A letter will bring you complete information.

The House of Wicks

WICKS ORGAN CO., HIGHLAND, ILL.

* * EDITORIAL

Englishmen against the charge of pompousness, and English humour generally, stating that the title "Hon." (honorary) is merely giving "honour where honour is due". (The u's are not ours.) Mr. Taylor's editorship makes this quarterly a fine publication; reading it stirs up in us a desire to take part in the professional life which it represents. It always seems to us that Dr. H. Lowery, M.Ed., D.Sc., Ph.D., F.T.C.L., Dr. T. J. Drakeley, C.B.E., D.Sc., Ph.D. F.R.I.C., along with H. Laramie-Fitzgerald, K.C., Bart., F.O.B., Q.E.D., of Upper Walmesley on Walmesley, must live in a fascinating world.

Mr. Taylor is the author of *The Chorale Preludes of J. S. Bach,* (Oxford), in which he firmly establishes his right to write on this subject. The book will be especially valuable to organists who are obliged to play on organs consisting wholly or predominantly of 16', 8', and 4' stops.

Now that we have been honored by replies to our facetiousness from most distinguished colleagues in England, we will make a confession. The significance of "Hon." in its several uses was not unfamiliar to us; we wanted to test British reader reaction. In each of the last four issues we have indulged in a game that used to be known as "twisting the lion's tail". The lion has reacted with characteristic dignity, through the pens of Messrs. Cooper, Taylor, and others. Net result: 45 percent increase in our English subscriptions.

William Leslie Sumner continues his invaluable account of Arp Schnitger. In this issue we learn that Schnitger was by no means unwilling to include old pipes in his organs, especially when they were the work of those builders whose instruments had served as models for his own art. The modern tendency to fasten our attention

BRIEFS ★ ★ ★

on the name of a single representative individual, which is responsible for our "star" and "big-name" enthusiasm, has led us to ignore the names of other builders, both before and after Schnitger, whose work was of the highest quality.

OUR WITTY AND INGENIOUS CORRESpondent, G. G. J. Cooper, Esq., is clearly entitled to an *Honorable* mention among those who have written to inquire just where they might expect to find themselves if, by calling a modern organ "baroque", they should provoke editorial wrath to the point of banishment into *interpeduncular space*. His strong etymological background enabled him to hypothecate "between uncle's legs" as a possible location. Interpeduncular space is actually an empty open place at the center of the human brain. Its size varies in individuals.

ALTHOUGH IT IS INEXPLICABLE TO US why it should be so, the Busman seems to rank high in popularity among readers. The nature of his comments has been such that we first thought his safety and well-being depended upon keeping his identity secret. But the consistently friendly tenor of inquiries about him indicates that it may be safe for the secret to be revealed. We have invited him to write memoirs of his long (too long) career in church music, under his own name, which is quite well known to readers. His summary of recent visits to churches is on page 44, and his reminiscences are on page 23.

BY THE TIME THIS ISSUE REACHES MOST of our readers, the Organ Institute Organ Tour will be well on its way, 35 strong. We regret that it was necessary to refuse a number of late applicants, but we could not impose upon the kind hospitality of our hosts in Europe by further enlargement of the group.

J. S. Bach Chorales

FOR ORGAN AND TRUMPETS

edited by E. POWER BIGGS

for Organ & 2 Trumpets in B♭

THREE WEDDING CHORALES

1. What God Hath Done, Is Rightly Done*
2. Now Therefore Bless the Lord of All*
3. Now Thank We All Our God*

TWO CHRISTMAS CHORALES & DOXOLOGY

1. All Glory Be to God on High
2. How Brightly Shines the Morning Star*
3. Doxology

for Organ, 3 Trumpets in B♭, & Timpani

TWO FANFARES & CHORALE

1. Praise to the Lord*
2. To Thee Alone be Glory*
3. Praise God from Whom All Blessings Flow*

each series,
score & parts, $1.00
extra parts, $.15

* *On Columbia recording ML-4635 "Bach Festival"*

ASSOCIATED MUSIC PUBLISHERS, INC.

publishers and importers of fine music

One W. 47th St., New York, N. Y.
1549 N. Vine, Hollywood 28, Cal.

★ ★ ★ A JOYFUL NOISE ★ ★ ★

HOMER G. MOWE

QUALITY IN THE SINGING VOICE

A DISCUSSION of the subject of Voice Quality divides itself generally into three parts: (1) What do we mean by the term "quality"—a definition of quality; (2) What are the causes of quality in the singing voice—an analysis of quality; and (3) What methods or means can be used to bring quality into the voice.

In deciding what we mean by the term "quality", we are faced with a number of definitions, for the reason that things can be defined from various viewpoints, scientific, psychological, and aesthetic. It would seem that if a satisfactory scientific definition exists it would be the most exact, although the question might remain in many minds as to whether it would be complete.

A tone has four characteristics: pitch, power, duration, and quality. Let us start with a survey of these before listing definitions.

Pitch can be scientifically and accurately measured. It's cause is well known—the number of vibrations per second. The terms used for various pitches are agreed on, at least in our Western World. Listeners could probably agree as to whether any certain tone in a song was "on pitch" or not. The cause of pitch has been understood since early times. Generally, singers can control pitch with some degree of accuracy.

Power can also be measured scientifically. It's cause is understood—the vibration of material over a wider or narrower arc, or more material in vibration. The names or symbols used in music to designate varying degrees of power, however, are not exact. Different singers do not deliver the identical degree of power in singing forte or piano. Listeners might not agree exactly on the power of any sung tone, although they would agree as to whether it was loud or soft. The cause of power has long been understood, and singers can control it with considerable precision.

Duration can also be simply and accurately measured. It's cause is known and we agree on the terms used in measuring it—seconds, et cetera, which are our ordinary time measurements. Listeners could agree easily on the general duration of a tone—long, medium long, or short. Duration of tone can be controlled with considerable ease.

Quality can also be measured scientifically, although musicians may question the complete accurary of such measurement. The terms used to describe quality, however, are not scientific, or accurate, or agreed on, at least in their application. Listeners can and do find themselves in considerable disagreement in judging the quality of any sung tone. While an appreciation of quality has always existed, an understanding of its causes has only lately been arrived at. Quality is not easily controlled by any but exceptionally well-trained singers.

What are some of the definitions of the word "quality"? The dictionary describes it as "a distinguishing element or characteristic"; "a degree of goodness, relative excellence, grade"; (physics) "that which distinguishes sounds of the same pitch and intensity from different sources, as from different instruments"; "timbre".

Scientists say: "The quality of a sound depends upon the number of overtones associated with the fundamental, and their relative intensity"; and "Quality refers to the harmonic composition of a complex tone—the arrangement, points of concentration, and general distribution of overtones with relation to the fundamental".

From another viewpoint, Fritz Kreisler, in answer to the question "What is a beautiful tone?" is said to have replied that he did not know, but that when he heard one he felt it up and down his spine. This standard of measurement is not scientific but it indicates the basis on which the quality of tone is generally judged—the way in which it affects us. The pitch of a sung tone can be identified by referring to a piano, a pitch-pipe, or some other pitch-set device. Duration of tone can be measured by the second hand on a watch. Power can be judged by increasing our distance from the singer. But quality is not susceptible to any such simple test, and a scientific measurement requires a properly equipped laboratory. We judge quality through our hearing and according to our training and experience.

Therefore, in describing quality we are forced to borrow terms. We say a tone is "good", "beautiful", "moving", "round", "full", "mellow", "complete", et cetera; or "poor", "thin", "nasal", "throaty", "shrill", "hollow", "breathy", et cetera. We choose our terms in accordance with the *personal standard* we have set up through our years of listening, and, in the case of teachers, by our ability to connect a certain quality with its cause.

On February 1 of this year, the press announced the unveiling of that unbelievable machine, the Electronic Music Synthesizer, which is able to duplicate the sound of any instrument and any voice. In addition it can synthesize sounds that have never been heard on earth. The inventors admitted that the machine could not equal the sound of the living performer, but believed that it compared with recordings. If the singing tone can be synthesized as well as analyzed, must we not admit that the scientific definition of quality is correct? Or is there some element in the singing tone that is not included in it?

Next to be considered is the question as to what are the causes, the ingredients, of good quality in the singing tone. From the physiological standpoint, it might be stated that good quality comes in a tone when there is complete and perfect functioning of developed and conditioned vocal organs; when all the parts engaged in the production of tone are each doing their share, no more, no less, and when no non-vocal parts are interfering; and when the physical condition is good and the whole act of phonation is accomplished in accordance with good form, which includes the animating impulse of the mind and the emotions.

Expressing the scientific viewpoint, Wilmer Bartholomew, in his article "The Role of Imagery in Voice Training", lists the attributes of good voice quality. He says that a good tone must have four characteristic attributes: vibrato, power, a low formant, and a high formant. The term "low formant" refers to the strengthening of a low partial in the tone, and "high formant" refers to a large amount of energy in a high partial.

Teachers of singing, I believe, generally agree to the necessity for the presence in a good tone of these four attributes. Of course, they use their own terminology in naming them. They ask for a "singing quality", "warmth", "richness", et cetera, which terms parallel the term "vibrato". They ask for "resonance", "depth", "fullness", et cetera, which terms indicate the something that Mr. Bartholomew calls "low formant". They ask for "ring", "brilliance", "peak", "point", et cetera, all of which seem to equal the term "high formant". Generally, they develop power in a voice, although they may not all work for the identical degree of power. Also they may differ in taste as to the balance between brilliance and depth. It would seem, however, that the scientists and

the teachers are in close agreement as to the attributes of good tone quality.

The third section of this discussion, how to develop good quality in a singing voice, leads directly into teaching procedures. There is also a preliminary question to be answered. Can we develop good quality? My belief is that this can be done and that teachers of singing are doing it every day in their teaching. Students come with poor tone—breathy, weak, over-nasal, throaty, hollow, pinched, et cetera (all terms relating to poor or incomplete use of the voice)—or, to phrase it differently, with faults in vocal action that veil the true quality of the voice. Teachers correct these faults, install good form, and a tone of better quality emerges.

In any discussion of voice teaching we ought first to remind ourselves of the difference between *principles,* which are basic laws governing voice use, and *methods, procedures,* and *devices,* which are the means employed to achieve our aims. Principles are few and unchanging and hold true in every case. Methods, et cetera, are numberless and vary with the needs of the individual. In 1938 the American Academy of Teachers of Singing issued a paper entitled "Some Principles in the Care and Development of the Human Voice from Childhood through Adolescence to Maturity", and in 1946 the National Association of Teachers of Singing issued its first paper, called "Training the Vocal Instrument". The Academy paper confines itself to a statement of principles. The Association paper provides a more detailed explanation of the principles listed. (Both papers are available on request.)

These documents supply evidence that the leading teachers in the country do agree on principles. This is a most important fact. They are then free to utilize any method that proves effective.

The key to the development of good voice quality lies in the adherence to the principles governing proper voice use. These include posture, attitude of mind and emotion, positioning and functioning of the vocal organs, and coordination of the body. As one improves in these areas, quality of tone improves. A listing of the methods to be used requires more space than is here available. Also their application requires experience and extensive knowledge of the voice. A pleasing and expressive quality of tone can be developed, however, in any normal voice, just as power, range, control, and the ability to handle language clearly and expressively can be developed.

ODELL ORGANS 1859

J. H. & C. S. ODELL & CO.
Organ Architects and Builders
— SINCE 1859 —
82-84 Morningside Avenue
Yonkers, N. Y. — YO-5-2607
Also
Tuning - Service - Maintenance Dept.

Casavant Frères Limitée

Casavant organ Jubilee Year
ST. HYACINTHE P. Q. CANADA

T. CARL WHITMER

CONCERNING IMAGINATION

SOMEONE has observed that everyone's mental outlook is likely to be obstructed in some area. Even the most discerning individuals with the broadest perspective sometimes have blind spots. This seems to me to be true of those essayists and pedagogues who have declared that *imagination* cannot be taught. Some believe that this is true of all the intangible subjects. Perhaps this judgment is valid with respect to the far reaches of such subjects, but teaching them can be constructive right up to the far reaches of vivid insight.

The organist is especially fortunate because the abundant resources of his instrument act as a powerful stimulant in fanning the fancy. As a result of my teaching experience and observation I believe that the so-called intangible subjects can be taught and are being taught with good results. But we must learn to teach imagination by quite different approaches from those employed in teaching muscular skills and generally less creative activities.

To say that one either has or has not imagination, and let it go at that, is just too easy a way for a teacher to earn his living! Let us not forget that the mind of every intelligent person always has reserve resources, including reserve techniques. One would think that, with all the volumes written about the mind (and available to all), teachers would more often make a study of what this amazing human mind can do. It can erect a strong scaffolding consisting of mental formulas, by means of which the always-variable and unpredictable emotional factors can be disciplined and channeled into the creation of a substantial structure possessing its own character and beauty.

Study a scientist's approach to his desired goal and see how he sends up a number of varied trial balloons. He experiments with combinations of elements and quantities, some of them arbitrary arrangements which may at the time seem utterly futile. But his mind has special eyes, as it were, which see possible new patterns of thought and material. After a while some discovery comes in sight. It may not be exactly what he looked for, but it may turn out to be better than he expected. It is discovery brought about by indirect approach. So, permit me to give an outline of what may be called "Teaching Musical Imagination by Indirection".

I shall assume that the organist to be trained just does not possess the intangibles needed to make his organ-playing interesting. In other words, his recitals are correct but unconscionably dull. The following is a plan for the work of a semester or an intensive summer session.

(1) Be sure to make the experiments with a short work which the student knows well enough to play with automatic technique, a piece that is chiefly polyphonic.

(2) Analyze the harmonic, contrapuntal, and structural bases.

(3) Take two phrases of this given piece and, choosing different tempi, titles, or moods, play them the first day in three different ways; the second day in four different ways; and so on up to ten different treatments, without changing registration. That is, set up one combination and retain it, so that the differences in treatment will not be just a matter of varied registration. Try to realize each mood as differently as possible.

(4) Take from these same two phrases, first the alto voice, then tenor, bass, and finally soprano melodies, playing each voice five ways, as with five titles. Organists seldom study the lower voices sufficiently.

(5) Take the whole piece, playing it three ways over three titles or moods, with varying speeds, styles, and with different registers, with now one voice and now another being brought out prominently.

(6) Then play the piece with all the different basic colors that the organ possesses, being sure to play the various voices prominently on different manuals, and with varied color schemes. Play it not less than five times, alternately with and without titles. Do not fuss with fancy registrations, for they may degrade taste. Always maintain musical integrity, by the avoidance of extremes, the too obvious, so far as may be possible.

(7) Make a study of the work as a whole with varied treatment of the swell pedals. Use them one-half open, one-quarter open, sforzando, crescendo, and decrescendo. Try for some sequential scheme. It is very amateurish to leave the use of the swell pedals to "inspiration", which usually means sentimental treatment, or at worst the irritating uneasiness of constantly changing dynamics.

(8) Turn now, for two lessons, to literature, choosing some short stories or excerpts from novels. Use short paragraphs to be read aloud by the student. Group in twos: one excerpt restrained, the other vibrant; one simple, the other complex; one by Anthony Trollope, one by James Joyce. Incidentally, this will help to train the student's word sense, something he can use in his choir work, where words need more attention than is usually given them.

(9) Have the student sing some well-known melody in five ways.

(10) Now play a folk song or dance with the conventional harmony, and follow it with a recording of Charles Ives' songs and dances. See what skyrockets he sends up, with a few high kicks included!

(11) By this time both teacher and student will understand, I hope, the basic plan. However, we have not yet made the maximum use of planned contrasts. So, go to a large picture gallery. If the instructor is shaky in the art of painting, have a guide. Show the student a picture from the early nineteenth century, perhaps by David, following it with an example of advanced impressionism (Monet) and some cubistic works. Examine many pictures by contemporary painters in various styles of abstraction.

It is altogether immaterial whether teacher and student like them or not. To talk about likes and dislikes simply sidetracks the issue. One's eyes will perceive differences, and these differences are results brought about by imagination.

Much of what is exhibited, in the modern field especially, is the result of problems posed in textures, in colors, or upon geometrical bases.

(12) Listen to musical examples that are imaginative. Play a record of a Mozart symphony (linear), the "Clouds" by Debussy (mass effects of color), and Stravinsky's "Sacre de Printemps". This last work is made up of violent rhythms and violent orchestration, and a lot of most everything else!

(13) Again, let us return to words. In the fifty-fifth chapter of Isaiah there is a paragraph which, if put into colloquial speech, would sound something like this: "If you're thirsty come on over for a drink. Don't worry if you're broke. Milk and wine are on the house."

But in the Biblical text this is expressed: "Ho, every one that thirsteth, come ye to the waters, and he that hath no money; come ye, buy, and eat; yea, come, buy wine and milk without money and without price."

In these more formal words there is displayed the whole panoply of impressive grandeur. Without this splendor one's whole world is dull, and music is still duller when deprived of it. Exactly the right manner of expression is essential in order to achieve full dramatic impressiveness in any musical performance.

(14) When all the above is well assimilated, play a different short piece every day in five ways without titles. About once a week see what can be done with two readings of something the student has never played before. This is to see how interesting he can make the work sound when sight-read.

(15) Finally, make up an hour-long program of works already in hand, trying not only for brilliance in energetic passages, but for a calm, controlled depth of feeling in the slow movements.

This brings up the problems inherent in program-making; but of course that is not the purpose of this article. However, I will give an illustration of poor arrangement of the finest masterpieces. It was many years ago but I shall never forget it. An excellent pianist played Beethoven's Opus 106, with that gigantic and endless Fugue at the close. Then followed immediately César Franck's Prelude, Chorale and Fugue, also quite long. Of course they canceled each other and caused a listener near me to say that he always thought he had a rather good sitting technique—but not that good!

In the procedure as I have given it there are two fundamental principles; namely: (1) that of bringing exaggeratedly strong contrasts into juxtaposition, as a sort of shock treatment; and (2) using the mind as one primes a pump. Several dashes of cerebration must naturally enter into the development of whatever subject is being studied. The mental factors must ultimately be emotionalized. The reader will at once think of Mozart, who was able to build upon and enrich the most complex theoretical schemes so that they sound as simple as a popular song.

Some readers will say that with such teaching the student's work may sound synthetic. It will be just that for a time; but this is better than playing like a plodder, who functions with aesthetic feet stuck in concrete.

However, the chief purpose of this essay is to open vistas to the organist who is slow in development. There are many, many fine musicians who have awakened to *fundamentals* slowly; and my chief hope and expectation is to reach those people who unfold their portals in adagio fashion. Even some great geniuses have been slow to mature. Study the progress of Beethoven in his symphonies, in his sonatas, in his note-books, and learn the meaning of intense, intensive effort; understand how such progress might seem slow to anyone who is not big enough to appraise his own growth, or who thinks that rushing through life is a sign of energy and determination!

The teacher of advanced counterpoint sometimes is responsible for the lack of imagination observable in many organists, especially when they play Bach. Such a teacher seldom makes the construction of a canon or a fugue an exciting thing, living and altogether vital on its own account.

A good example of this kind of dry thinking is shown in the slow grasp of Bach's Art of Fugue. It was about a century and a half before the world realized these canons and fugues were rich musical material, as is most easily shown in some orchestrations of the work, such as that of Gläser. Many years ago I heard Leopold Stokowski and an

orchestra interpret the Gläser score at a Coolidge Festival in the Library of Congress. It was adventurous excitement with the finest kind of artistry; and artistry, in the last analysis, is comprehensive integrity.

Some readers may recall that in an essay of mine, "Invitation to Improvisation" (ORGAN INSTITUTE QUARTERLY, Autumn 1952, volume 2, number 4), I wrote: "One difficulty that we have in educating ourselves in any field is our usual unwillingness to go on mental as well as emotional adventures. So many think of The Arts in terms of emotional sprees; and if their ideas do not grow and wax fat in a hurry, they are unhappy and give up trying. All the arts are based on formulas which require thought, calculation, and assimilation before they can have emotional driving power."

I conclude with a paragraph I wrote years ago for my composition students and which seems of value now.

"The joy of living is a prominent factor in creation (and imagination is definitely creative). When there is a freedom of soul, an enjoyment of the great urges of life, there is an accompanying plasticity of vision, and more abundant ideas than when it is imagined that the cares of the world are to be born as by a musical Atlas groaning under the heavy burden of our fathers' *Weltschmerz*. One need not attempt such an exaggerated role. Keep alive at all costs. Live and work until your music reflects abundant spirits. Invent titles just to stimulate yourself. And, if titles do not stimulate, invent moods. Or, if nothing but "Opus 80, Number 1" acts as an electrifier—why, go ahead and name it that! I know one to whom "Allegro" has more urge and kick than the idea of the maddest carnival. Just as some churches are named after saints, while others get along quite well with names of numbered streets!"

"A GREAT REPUTATION"

Durability, simplicity, accessibility and general excellence of construction and finish, both mechanically and tonally, are qualities which have made the name "Hillgreen-Lane" famous for half a century.

Builders of Organs since 1898

HILLGREEN, LANE & CO.

ALLIANCE, OHIO

FRANZ HERRENSCHWAND

SILBERMANN ORGANS IN SWITZERLAND

UNFORTUNATELY only a few of the instruments which Andreas Silbermann and his son Johann Andreas built in Switzerland are left; but nevertheless these remains are important enough to be studied and to give us an impression of the artistic work of the Silbermanns, father and son, of Strasbourg. In this study we are going to deal with all their organs in Switzerland and, in so doing, make a contribution to the history of two of the greatest organbuilders of the eighteenth century. For help and advice I am much indebted to Dr. H. Lanz of the Historical Museum of Basel, to Dr. K. Zeltner of Arlesheim, and also to Professor Paul Smets of Mainz for providing the original stop list of the organ in Basel Minster.

Before going into details let us present a list of the more important organs of both Andreas and Johann Andreas Silbermann, including their instruments in Switzerland and some important dates of their lives.

ANDREAS SILBERMANN

Born 1678; died March 16, 1734.

On March 13, 1702, he became a citizen of the town of Strasbourg.

In 1708 he married Margaretha Schmid; they had nine boys and three girls.

WORKS:

1710 Maursmünster Abbey Church (changed and rebuilt in 1746 by Johann Andreas; he added a third manual [Récit] and some pedal stops)
1710-1711 Basel Minster
1712 Basel, Saint Peter's Church
1713-1716 Strasbourg Minster
1716-1717 Basel, Saint Leonhard's Church (in 1770 his son Johann Andreas added a Rückpositiv)
1730 Ebersmünster Abbey Church

JOHANN ANDREAS SILBERMANN

Born June 26, 1712; died 1783.

Citizen of the town of Strasbourg. Beside his fifty-four organs in Alsace and in Switzerland he also built pianos and wrote a very good history of the town he lived in (Strasbourg).

WORKS:

1737-1740 Strasbourg, Saint Thomas' Church
1754 Colmar, Saint Martin's Minster
1765 (1761) Arlesheim Domchurch
1766 Mühlhausen
1766-1767 Basel, Predigerchurch
1768 Schlettstadt (Séléstat), Saint George's Minster
1768-1770 Basel, Saint Theodor's Church
1772 Saint Blasien (Germany) Abbey Church

ADDITIONS:

1769 Basel, Predigerchurch, Rückpositiv
1770 Basel, Saint Leonhard's, Rückpositiv

Andreas Silbermann's first organ for a Swiss church was begun in the same year that he finished one of his major works, the one in Maursmünster Abbey Church, which is still in quite good condition and at this time under reconstruction by the firm of Ernest Mühleisen at Strasbourg. In 1711 the organ for Basel Minster was completed. Andreas changed and rebuilt pipes and chests, leaving the case and front, which dated from an older instrument, unchanged. This case had those famous wing-doors to close the front that were painted by Hans Holbein D.J., an important painter of Basel, who spent a great part of his life in England at the court of Henry VIII (there is a portrait of the King by Holbein at Warwick Castle), and who must be placed right after Albrecht Dürer when one speaks of German Renaissance painting. Holbein lived from 1497 to 1543; the wings, which are kept in the Basel Public Art Collection, were painted after 1524. The front of the organ looked very much like that of Strasbourg Minster and probably dated also from Gothic times. The new organ contained 21 stops with a total of 1,256 pipes. Silbermann took only 129 old pipes and built all the others new. Thanks to his diary, which is kept in Paris (Archives Silbermann), we know the stop list, the organ itself having completely disappeared. It was:

Oberwerk
8′ Principal
8′ Copel
4′ Oktave
3′ Nazard
2′ Super Oktave
1 3/5′ Terz
IV Mixture (1 1/2′)
III Cimbal
8′ Trompette
8′ Voix Humaine

Positiv
8′ Copel
4′ Principal
3′ Nazard
2′ Oktave
1 3/5′ Terz
III Mixtur

Pedal
16′ Principal
8′ Oktave
4′ Super Oktave
IV Mixtur (1 1/2′)
16′ Bomparte

In 1855 and 1856 the organ of the Minster was transferred to the Church of Saint Martin in Basel. Some organ experts suppose that the present case in this church is in part still the original old Minster organ. The pipes and chests were entirely changed, and today nothing is left any more of this first organ which Andreas Silbermann built in Switzerland. It is clear that between 1711 and 1855, when the new organ for the Minster was built by Friedrich Hass (4 manuals, 60 stops, open 32′ in the pedal), the Silbermann instrument had been changed several times. So far I cannot provide any details about these changes. The records are stored in the Basel Staatsarchiv, and it would take several weeks to search them for notes about changes and repairs to the organ.

In 1712 Andreas Silbermann was again called to Basel to build a new organ for Saint Peter's Church. Good fortune has preserved to us the original contract between the master and the community, with the stop list of the instrument appended. The contract (signed September 9, 1711) and a letter which Andreas wrote to the community give us a lively idea of the principles of an organbuilder's work of these times. Silbermann exactly described the quantities of the different materials he required for the organ and also gave a list of everything which the community had to provide for him while he lived in the town to build the church organ. The stop list was this:

Hauptwerk	*Rückpositiv*	*Pedal*
16′ Copel	8′ Copel	16′ Supas
8′ Principal	4′ Principal	8′ Octaven
8′ Copel	3′ Nazard	4′ Octave
4′ Oktave	2′ Oktave	16′ Bompartte
3′ Nazard	1 3/5′ Tierce	
2′ Super Oktave	III Mixtur (1′)	
1 3/5′ Tierce	8′ Cromhorn	
III Mixtur (1 1/2′)		3 manuals and pedal,
III Cimbal		24 speaking stops,
V Cornet (c^1 to c^3)	*Echo*	2 tremulants,
8′ Trompette	V Cornet (c^1 to c^3)	1,498 pipes (1,379 tin,
8′ Voix Humaine		119 wood.)

This organ was also changed in the nineteenth century; and today pipes and case have disappeared completely, having been replaced by one of these notorious "neo-gothic" cases and stop lists which have earned a sorry reputation among European organists. Basel today could be a place of pilgrimage for those seeking Silbermann organs if those people of the past century who had lost a true appreciation of Baroque organs had not destroyed so many works of this master, who belongs among the greatest builders of the eighteenth century.

A letter of Andreas which he wrote on October 12, 1712, gives proof of his satisfaction in the successful work, and in this letter he also draws up a very detailed note about his expenses. As a special honorarium he received a coin of 20 ducats; and his partners who had helped him, 8 louis d'or. Among the 1,498 pipes of the instrument there were 1,379 of tin and only 119 of wood. Even the feet of the pipes had an alloy of 20 percent tin and 80 percent lead (plummet). The compass was C, C♯, D to c^3; and so Silbermann was one of the first organbuilders to discontinue the practice of omitting the low C♯ and D♯. His brother Gottfried, for example, only in his last organ, at the Dresden Schlosskirche, decided to build the low C♯, having already added the low D♯ to some earlier organs. Also this organ (Saint Peter's) had wings painted by Holbein. When Andreas Silbermann, after the completion of the organ, went home by boat, near Istein he was detained by the Austrians, who thought he was a spy traveling down the Rhine. He was put in prison for four weeks at Rheinfelden and released only when a friend of his, a Basel merchant, paid his bail.

It was four years before Andreas again appeared in Basel. In those four years he had built his masterpiece, the organ in Strasbourg Minster, which is in part still original today. In 1716 he signed a contract for a new organ with the community of Saint Leonhard at Basel. This contract gives us some indication of the general lay-out of the instrument. Unfortunately the stop list is lost, but we may suppose that it was similar to the one at Saint Peter's. In 1770 a Rückpositiv was added to this instrument by Johann Andreas. This will be treated among the latter's works. This organ also has disappeared, except the greater part of the case, which is still original. Even the Rückpositiv case is here, but empty. In 1880 Th. Kuhn built his opus 44 into this lovely case, which stands on a side gallery of the late-Gothic Hallenchurch of Saint Leonhard. Now this instrument awaits rebuilding along original lines.

Johann Andreas was born in the year when his father built the organ at Saint Peter's in Basel. Perhaps he was born in this town, since organbuilders used to live for quite long periods in the towns where they built their instruments.

His first work for a Swiss church was the one for the Domchurch at Arlesheim, some thirty minutes by streetcar from Basel. Some authorities say it was built in 1761; others say 1765. Since we have no contract and know it to be a Silbermann only by a note in the archives of the Domchurch, and by comparing certain stops with others by Johann Andreas (a comparison which Mr. Ernst Schiess of Bern made with great skill), we do not know which is the correct date. General circumstances seem to confirm 1765.

Because of the absence of a contract we do not have the original stop list of this organ. We can reconstruct it, since we know that the instrument originally had about 35 speaking stops. The present case is the authentic one, but most of the pipework and the chests have been changed several times. After Dr. Zeltner's reconstruction, the stop list of the instrument was this:

Hauptwerk
16′ Bourdon
8′ Montre
8′ Bourdon
4′ Préstant
2 2/3′ Nazard
2′ Doublette
1 3/5′ Tierce
1′ Sifflet
IV Fourniture
III Cymbale
V Cornet
8′ Trompette
8′ Voix Humaine

Rückpositiv
8′ Bourdon
4′ Préstant
4′ Flûte
2 2/3′ Nazard
2′ Doublette
1 3/5′ Tierce
1 1/3′ Larigot
III Fourniture
8′ Cromorne

Echo
8′ Bourdon
4′ Préstant
2 2/3′ Nazard
2′ Doublette
1 3/5′ Tierce
1 1/3′ Larigot
1′ Flageolet
8′ Hautbois

Pedal
16′ Subbass
8′ Octave
4′ Octave
16′ Bombarde
8′ Trompette

In the archives of the Domchurch are some notes about a renovation and reconstruction in 1888, done by Weigle of Stuttgart (Germany). Several stops were changed and replaced by others that were currently favored (mixtures became strings!), and a new console was built. The stops which had been in the Rückpositiv were put into the main case above the main pipework. Also some additions were made to the Pedal. In 1913 the organ was completely cleaned and on that occasion two new stops were added, as well as an electric blower. The present stop list is this, and we are sure that the stops marked with an asterisk are still authentic Silbermann pipes:

Manual I
16′ Bourdon
*8′ Principal
*8′ Bourdon
8′ Viola di Gamba (1888)
*4′ Octave
*2 2/3′ Nazard
*2′ Octave
*1 3/5′ Terz
*1′ Sifflet
*V Cornett (8′, from c^1)
8′ Trompette
8′ Voix Humaine

Manual II
8′ Geigenprincipal (1913)
8′ Bourdon
8′ Salicional (1888)
*4′ Octave
4′ Flûte
*2 2/3′ Nazard
*2′ Superoctave
*1 3/5′ Terz

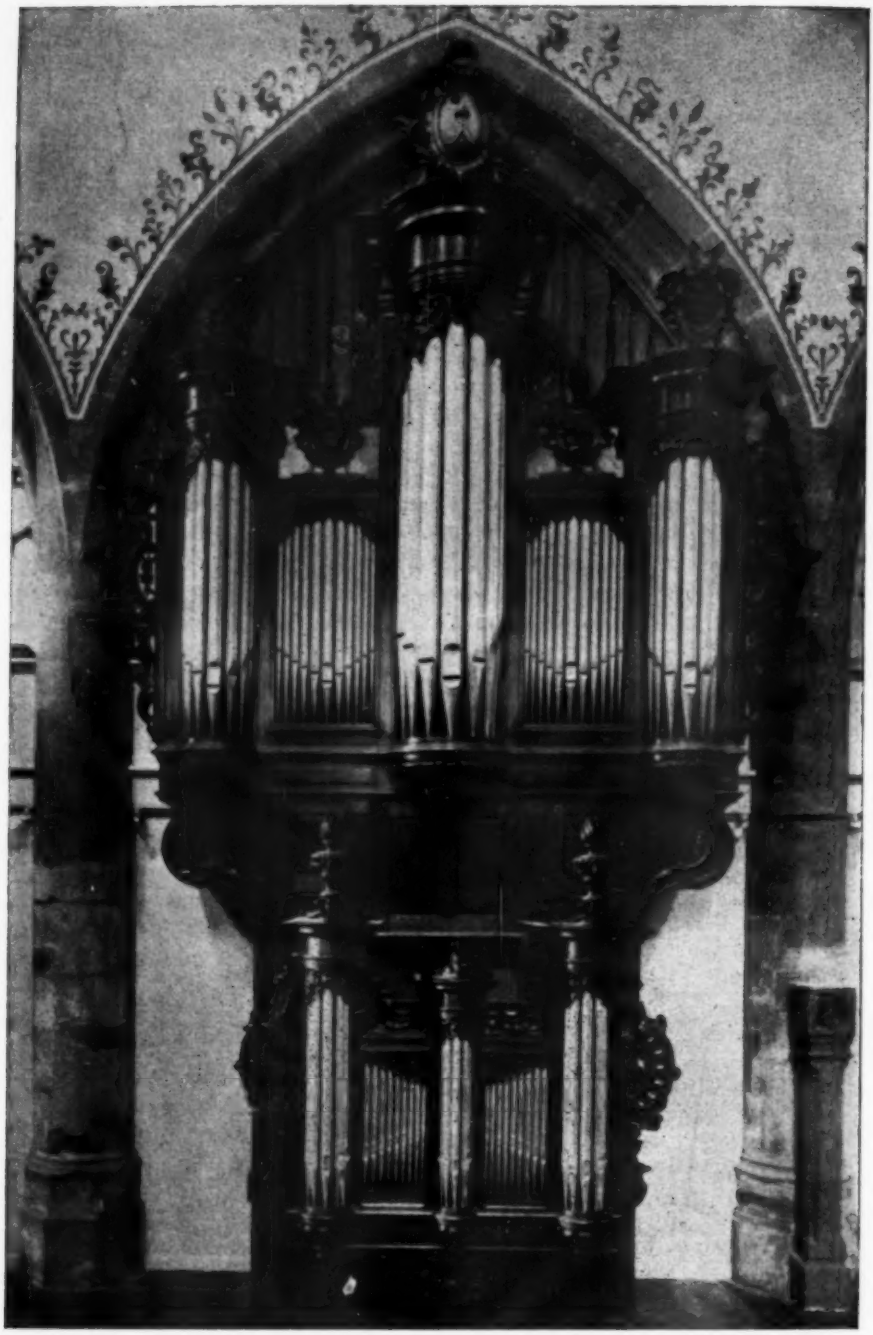
Manual III (Swell)
8′ Bourdon
8′ Flöte (1888)
8′ Aeoline (1888)
4′ Flûte (1888)
4′ Gemshorn (1913)

Pedal
16′ Contrabass (1888)
16′ Subbass
8′ Octavbass
8′ Violonbass (1888)
8′ Trompete

Only about one year after the organ at Arlesheim was completed Johann Andreas signed a contract for a new instrument in the church of the little French community at Basel. This community had bought the old Predigerkirche and remained there until 1877, when they built a new church. The Gothic Predigerkirche then was sold to the Old-Catholic congregation of Basel, in whose possession the building and the organ still remain. The instrument was transported to Basel on September 5, 1767, and Johann Andreas was paid after the erection of the organ on October 11 of the same year. He earned 3,150 French guilders. A few days later he offered a proposal for a Rückpositiv for this organ, which was accepted. The new part was installed in April 1769, and Silbermann received 1,086 guilders. The organ had 12 (later 13) stops on one manual and 4 on the pedal; and the Rückpositiv contained 7 stops. This Rückpositiv was probably already planned when the contract was signed but the building of it was postponed because of lack of money (the French community was quite small). Unfortunately also here the records could not be found. When we deal with the organ of Saint Theodor we will realize that both organs probably had about the same stop list, and that both were only conventional examples. The Great had one 16′, 8′ Montre and 8′ Bourdon, one 4′, mutations and two mixtures, while the Rückpositiv had a Larigot and a Fourniture beside the other stops. The organ in the French church was the model for that in Saint Theodor, and its specifications definitely inspired those of the latter church. The instrument was changed several times and also removed from the rood screen (which stood between the nave and the choir of the church) to a west gallery which was built late in the nineteenth century. The last changes were made in 1928 (cleaning, revising of the new pneumatic action, et cetera). The Rückpositiv is still there but silent, and the main case in general is still original. The present specifications of the instrument are:

Manual I	*Manual* II (*Swell*)	*Pedal*
16′ Bourdon	16′ Lieblich Gedeckt	16′ Principal
8′ Principal	8′ Principal	16′ Subbass
8′ Bourdon	8′ Quintatön	16′ Violonbass
8′ Gemshorn	8′ Wienerflöte	16′ Echobass (borrowed from II)
8′ Dolce	8′ Aeoline	10 2/3′ Quintbass
4′ Oktave	8′ Voix Céleste	8′ Octave
4′ Flöte	4′ Viola	8′ Cello
4′ Nachthorn	4′ Traversflöte	4′ Oktave
2 2/3′ Quinte	2′ Flautino	16′ Posaune
2′ Oktave	2 2/3′ Mixtur	8′ Trompete
V Cornett (8′)	8′ Trompette Harmonique	Modern console with various couplers and other aids.
2 2/3′ Mixture	8′ Oboe	
8′ Trompete	Tremolo	

Quite shortly after the completion of the organ at the Predigerchurch the community of Saint Theodor in Basel decided to have a new organ built for their church, which is situated on the right bank of the Rhine river. The old organ dated from the sixteenth century and was changed several times in the seventeenth and the first half of the eighteenth. On July 28, 1748, lightning destroyed parts of the church, and the condition of the instrument became so bad that after a new repair on October 4, 1767, the community wrote a letter to the town council, asking for permission to build a new organ. The letter was signed by a parson and contained Johann Andreas Silbermann's



BASEL, SAINT THEODOR ORGAN OF 1770, NOW IN THE HISTORICAL MUSEUM (BARFUSSER-CHURCH). CASE WITH SEPARATE RUCKPOSITIV IN LATE-BAROQUE STYLE.

(PICTURE KINDLY PROVIDED BY DR. H. LANZ OF THE MUSEUM.)

suggestions for the new instrument. There was also a note that his son Daniel, who had already worked on the organ of the Predigerchurch, would help him again in this new operation. The community wrote that the "French" people were so satisfied with their excellent organ that they, the community of Saint Theodor, would like to have one built by the same artist, especially since the proportions and general arrangements of their church were about the same as those of the Predigerchurch. They even suggested the same case with a Rückpositiv, for the price of 4,800 French guilders. In March 1768 the project was approved, and Silbermann signed the contract. In the following year, after the removal of the old organ, the church was renovated and the rood screen prepared for the new instrument. The old one was sold to the Catholic community of Saint Clara, their church being only some 100 meters distant from Saint Theodor's. The whole organ was built at Silbermann's workshop in Strasbourg except the coats of arms (armorial bearings) of the two mayors of 1769 and the two of the preceding year. These parts were carved in Basel and attached to the case when the organ was erected in the church (on top of the "towers"; see picture). It was finished in the spring of 1770, and on June 22 of the same year Silbermann signed a receipt for his payment of 5,000 guilders. The contract required 4,800, and 200 were added (during the operation) for a third manual, the Echo. The contract for the organ had been signed on October 4, 1767, and also contained the stop list. It was this:

Manual-Werk	*Rückpositiv*	*Pedal*
16′ Bourdon	8′ Bourdon	16′ Supbass
8′ Montre	4′ Prestant	8′ Octavenbass
8′ Bourdon	3′ Nazard	16′ Bompartto
4′ Prestant	2′ Doublette	8′ Trompette
3′ Nazard	1 3/5′ Tierce	
2′ Doublette	III Fourniture	
1 3/5′ Tierce	8′ Cromhorne	
V Cornet		
III Fourniture		
II Cimbale		
1′ Siflet		
8′ Trompette		
8′ Voix Humaine		

While Johann Andreas constructed this organ he also cleaned the instruments in the Minster, Saint Peter's and Saint Leonhard's, the three built by his father.

The case of Saint Theodor is typical of all Silbermann organs which have a Rückpositiv. It was built in the same proportions and arrangements established by Andreas and later imitated by his son; also, father and son used the same material: oak. The organ was repaired in 1797 for the first time, but afterwards almost every year. In 1883 it was removed to the new west gallery (the rood screen was destroyed), and on that occasion many stops were changed. In 1916 the instrument was sold to the Catholic Church of Saint Imier (Jura Bernois) and altered again. Fortunately in 1914 a parson who was an organ-fancier himself inspected the organ and made a note of the stop list. Names of the new additions seem to have been written on paper and affixed over the original inscriptions. By this it was easy to reconstruct the original stop list, including the Echo manual, and I herewith quote it wholly:

Hauptwerk (Manual II, 49 keys)	*Rückpositiv* (Manual 1, 49 keys)	*Echo* (Manual III, 25 keys, from c^1)
16′ Bourdon	8′ Bourdon	8′ Bourdon
8′ Montre	4′ Préstant	4′ Préstant
8′ Bourdon	2 2/3′ Nazard	2 2/3′ Nazard
4′ Préstant	2′ Doublette	2′ Doublette
2 2/3′ Nazard	1 3/5′ Tierce	1 3/5′ Tierce
2′ Doublette	III Fourniture	III Fourniture
1 3/5′ Tierce	8′ Cromorne	
1′ Sifflet		
V Cornet (8′) (from c^1)	*Pedal* (20 keys)	
III Fourniture	16′ Subbass	Coupler 1-2 (RP-HW), 3 tremulants (one for Voix Humaine).
II Cymbale	8′ Octave	
8′Trompette	16′ Bombarde	
8′ Voix Humaine	8′ Trompette	

When in 1951 the Catholic community of Saint Imier decided to build a new organ, the Basel Historical Museum was interested in buying the old Silbermann case, so as to have this piece by a famous organbuilder stored in the Museum, which is located in the old Barfüsserchurch. So this case, which is 8 meters high and 6 meters broad, was removed to the Museum, and by good fortune also the Rückpositiv was found again. In the 1880's it was stored in the tower of Saint Theodor (it was no longer used when the organ was moved to the west gallery); and shortly afterwards it was sold to someone who wanted to build a house organ of it. In 1950 it was offered to the Museum when the plan to buy the organ became public. Today the organ stands in the Museum, but unfortunately it does not sound. The worms had done their work, and it was necessary to remove all the wooden pipes in order to save the precious case. Now the case is almost empty, and only the original tin pipes in the front still exist. We all hope that some day the missing pipes and the chests will be reconstructed after the original scales (taken from instruments still existing), and that this organ will sound again. Saint Theodor's today has an average organ made in a factory, and would certainly be proud to possess the case which dates from a time when factory organbuilding was still unknown.

On August 2, 1770, while living in Basel, Johann Andreas's son and partner Daniel died suddenly at a very early age. After this great loss the father went back to Strasbourg to build the Rückpositiv for the organ of Saint Leonhard that had been planned by Andreas but never built. He had signed a contract for it on May 19, 1767, giving this stop list for the new section: 8′ Bourdon, 4′ Préstant, 2 2/3′ Nazard, 2′ Doublette, 1 3/5′ Tierce, III Fourniture, 8′ Cromorne.

The contract also describes very carefully the case of the new part, and gives some general remarks about the use of a Rückpositiv. It was installed in 1771; and Silbermann received 1,330 French guilders for his work and the material on May 24, 1771.

This was his last work for Switzerland, and one of his last anywhere.

The findings of our study are not the brightest. Except the four cases of the Predigerkirche, Saint Theodor's, and Saint Leonhard's, and the one in the Catholic Domchurch of Arlesheim, and some original stops in the latter organ, everything of the work in Switzerland of father and son Silbermann has disappeared. Theirs was a rich work whose loss we deeply deplore, but after all we are grateful for this part of it which has endured to our time and will remain for some more generations.

ARP SILBERMANN BACH

REMINISCENCES

AS we all know, church organists are sometimes appointed by music committees and ministers who are actually ill-qualified to evaluate musical ability, training, and experience. This being the case, the determining factors are likely to center around the candidate's personality, or the enthusiasm with which one member presents the recommendations of a friend of a friend; accidental circumstances frequently influence the case. As a consequence, many excellent musicians are obliged to spend their days in limited situations, with poor organs, poor choirs, and very little pay. I was lucky and was given an opportunity to work in a church with adequate resources and considerable interest in good music, but it came about in an unusual way.

As a choir boy I made my decision to become an organist, and never really seriously considered any other career. However, this profession did not seem very promising to my elders, and settlement of the question was supposed to be postponed until later, after college. But my organ teacher recommended me to a church in such enthusiastic terms that as a university student I found myself journeying to a remote suburb by ferry and train three times a week, to conduct rehearsals of a boy choir. I usually spent all day Sunday there, visiting between morning and afternoon services, most often at the rectory.

Untried and inexperienced as a choirmaster, and all too recently a choir boy myself, the question of authority and discipline seemed rather delicate. I decided to raise a mustache in order to enhance my dignity vis-a-vis the choir boys, of whom the oldest were nearly my own age and beginning to sprout silky whiskers of their own. After a number of months I became convinced that this badge of my authority would grow in more impressively if I shaved it off and started it over again. On the first day after its removal a husky fourteen-year-old, who sang soprano like an angel but spoke like a basso profundo, was heard to ask, in a tone of testy superiority, "Who's that new kid?"

It developed that the only way I could maintain the discipline necessary for good musical results was to become a martinet. A strict, almost military, discipline was much easier to maintain; I administered sharp reprimands and imposed fines unmercifully for the slightest inattention or deviation from prescribed behavior.

One of the most difficult problems was to get the boys' full attention concentrated on singing certain music in the middle of the service. While they were kneeling during the long prayers of the communion service, their minds were usually over the hills and far away. Leaning against high music racks, they found it possible to engage surreptitiously in all sorts of illegimate activities. Pockets and folds of cassocks sometimes concealed the most unexpected items. In preparing vestments for a cleaning the choir mother once inadvertently freed a small snake that slithered away to some remote corner of the parish house, never to be seen again. During the prayer of consecration one Sunday morning a pair of dice clattered across the floor between the two sides of the choir. Their owner evidently felt an understandable hesitation about retrieving them just then, so they remained right where they fell, throughout the service, in full view of communicants as they advanced to the altar rail. They were later confiscated by the sexton, whose shocked sense of ecclesiastical propriety made little impression on the boys, since

they had heard that in the part of town where he lived, he himself was known as a past master of the cubist's art.

And during the long communion service it was by no means unknown for boys to place their heads on their hands and fall asleep. Complete attention at critical moments was always a difficult achievement. Accordingly, we devised a routine that was supposed to ensure concentration at the time of the Sanctus. The preface to the Sanctus includes the words, "Therefore with *angels and archangels*"; we selected these easily remembered words as the signal for all to assume an erect, good-singing position, with eyes on the choirmaster, ready to follow his directing, and to begin the Sanctus immediately after the final words of the preface, "evermore praising Thee and saying". This routine was stressed repeatedly and severe penalties for non-conformance were set up. The scale of fines for misbehavior in church ran something like this: chewing gum or eating candy, 10c; reading funnies, 10c; drawing nude women in prayer books, 10c; failure to come to attention at "*angels and archangels*," 25c.

The rector of this parish was unmarried, and his aged mother lived with him. Both of them were unusually fond of pets. The mother lavished her affection on a white rooster, which walked beside her when she did not carry him, and enjoyed the run of the churchyard, and slept perched on her half-opened closet door at night. The minister himself was devoted to two tremendous tomcats, Aaron and Moses. Moses was of mixed descent, but all white; he was wily and only a shade less aggressive than Aaron, a tiger. These qualities were clearly demonstrated at mealtimes, when their master fed them with scraps tossed from the table onto newspapers spread on the floor especially for them. They ate with the family, their master fed them himself.

On Sundays, the Father Rector abstained from eating any food before the early communion service, which was followed almost immediately by Sunday school, which in turn lasted until just before the main service, at 11 o'clock. As a consequence neither he nor the cats had anything to eat until lunchtime on most Sundays. All three of them must have been ravenously hungry. Feeding them from the table at Sunday lunch was therefore quite an event. The cats' ferocious growls delighted the man of God! Perhaps he thought he was avenging the early Christian martyrs who were thrown to the lions, or maybe he was just goaded by some parishioner's disapproval of his High-Church ways, but he seemed to enjoy watching the cats struggle over each scrap of meat. Occasionally he reproved them in a haughty tone of voice, when they became *too* noisy.

In warm weather there was likely to be a lot of unhappy howling in the churchyard during service. One bright sunny morning in late spring, when the minister's booming voice could be heard outside through the open windows, an usher made the mistake of opening the inner vestibule door at just the wrong moment. Like a white streak, Moses went up the main aisle and mounted the choir steps, where he paused just long enough to arch his back and point his tail to the ceiling. From thence he strode deliberately to the steps of the altar and sat down growling beside the kneeling acolyte, like a special lay deacon! This occurred during the preface to the Sanctus; it seemed likely that our carefully rehearsed alert was in great jeopardy. Every member of the choir came within my view through a system of mirrors. I did my best to glare at all of them at once, in order to engage and command their attention. A few momentarily deflected glances did return to me. At the words "evermore praising Thee and saying" — the exact mo-

ment when we were poised, ready to take off in polyphonic flight — a yowling obbligato to the priestly monotone rang across the chancel. But, wonder of wonders, there was neither snicker nor smile. The music was begun well and sung with a fine effect. Sometime during the singing an acolyte picked up the cat and carried it out, while the high notes of boy sopranos, in the soaring melodies of Palestrina, reverberated unwaveringly down the nave. It did seem to be quite an impressive performance, a triumph or something or other!

About a month later I was invited to come and meet the music committee of a very well known church in another much more luxurious suburb. This church had the reputation of being an exclusive millionaires' Sunday-morning club. The post as organist there was much coveted. If I could obtain it I would undoubtedly achieve full justification in the eyes of my family and friends, and of certain members of the university faculty who had joined their voices to the swelling chorus of opposition to my choice of a musical career.

Rumor had it that a nationally known concert organist had been chosen for the post. Later it was said positively that one of the greatest European organists had been engaged.

Finally the day came. I was ushered straight to the organ and asked to play for the assembled music committee of about twenty-five persons. The crucial moment had arrived. I fully realized that I had reached a turning point in my life. My entire future would probably be determined, one way or another, by the events of the next hour.

To my dismay I found the organ to be a horrible old box of whistles; some stops didn't work at all, others could not be shut off, some keys were silent. I struggled through one piece after another while the committee sat in stony silence, giving no sign of their approval or disapproval. I had begun to feel as though my last end was near, when a figure arose from the group and strode forward. He was the organist of a neighboring parish and an elderly bachelor, a popular dinner guest, who as usual had dined well that evening. Majestically clearing his throat and twirling his mustache, he leaned over the console and rattled off a quick little tune, and said, solemnly, "Extemporize on that." The fear of humiliating failure that had already begun seeping in around the edges of my consciousness swept over me like a flood. My musical training up to that time had not included such work in improvisation, nor anything like it. I have always felt certain that this older organist, who had been trained in Europe, where such studies were customary, was simply trying to show his superiority by this imposing and, to me, cruel, gesture. At any rate, I began blindly and wrestled with it for a while; I cannot remember anything whatever about this *entirely* spontaneous composition, except that I finally put on the full organ and brought matters to a noisy conclusion. After a few murmurs of conversation the chairman of the music committee stepped forward and asked me to come and meet the other members of the committee.

I was subsequently to learn that this courteous and kindly gentleman always sat in the front pew at church because of his wife's imperfect hearing. From this vantage point he was able to observe all that occurred in the choir, much of which had, just prior to that time, incurred his disapproval. The organist whom I was hoping to succeed was a sensitive musician whose absorption in music and other aesthetic contemplation made it difficult for him to cope with the unlimited energies of his more earthbound younger choir members. In fact, the music-committee chairman had only recently felt obliged to rise from his position in the front pew and step up into the choir to

separate two boys who were engaged in an all-out fist fight during the sermon. All this was unknown to me at the time, however; and so, in consideration of what seemed to me to have been my hopeless failure, I was astonished to hear him say, after introducing me all around, "I am so glad that everyone on the committee has had this opportunity to confirm my judgment of your playing. We thought that we all ought to hear you before making a final decision. There has never been any doubt in my mind that you should be our new organist and choirmaster, after that demonstration of the remarkable discipline in your choir on the Sunday when I visited your present church, the day the cat walked into the chancel during the communion service."

I was dumbstruck. And it surely was a kindly providence that rendered me momentarily speechless, because that *prevented* my telling him that the "demonstration" was somewhat less remarkable than he thought, since, as it happened, the cat came into church during Sunday morning services as often as warm weather and fortuitous circumstances permitted, and the choir boys were by then quite blasé about it! Instead, I silently resolved to make (someday) a provision in my will for the maintenance of retired church-going cats.

REUTER . . .

An organ of the highest structural and musically artistic quality in every respect.

We invite your inquiries

THE REUTER ORGAN COMPANY
LAWRENCE, KANSAS

ORGELECTRA

The First and Only Key Action Current Designed and Engineered Specifically for Pipe Organ Use

W. L. SUMNER

ARP SCHNITGER

THE influence of the Thirty Years' War is seen in the state of organbuilding in Germany in the post-war years of the latter half of the seventeenth century. The luxuriant floriation of organ stops (of which Prætorius lists about ninety) in the pre-war years, and the means to build large new structures were not evident half a century afterwards. Instruments of the sixteenth century which had not been destroyed entirely in the protracted struggle and which contained usable pipework were carefully reconstructed, with the addition of new ranks, such as the tierce. Many of the one hundred and fifty organs given as the work of Schnitger were rebuilds; some were conservative rebuilds and some were restorations. Two examples should be cited because they are often mentioned in a way which implies that they are absolutely new Schnitger works.

The organ now at Cappel contains more Renaissance than Baroque work. The organ at Saint Jakobi, Hamburg, though typical of the high Baroque in design, contains work by both Scherer and Hoyer. However, it must be conceded that there were many new instruments, of which those in Magdeburg, built to replace the organs entirely obliterated by Count Tilly, were notable.

In general, in the years of post-war reconstruction fewer types of organ pipes were made than in the palmy days at the beginning of the seventeenth century. Nevertheless, Schnitger benefited by the Dutch influence which had come to him through the experience of the Fritsche family. Notably, experiments were being made with the tierce rank as a constituent of composite organ tone.

Schnitger scales were founded on those of Scherer, Compenius, and Fritsche, but were modified to suit each organ and the building in which it was placed. It need not surprise us that we find that his scalings are often non-uniform. The acoustical properties of a building and the response of the human ear are non-uniform!

The uniform scalings, such as one to the square root of eight for areas of pipe sections at the octaves, as given by Töpfer, and which were such a feature of organbuilding in the nineteenth and early twentieth centuries, resulted from a number of considerations:

(1) The German physico-philosophical desire to generalize in terms of the physics of sound. Hence the quasi-scientific work of Töpfer, which avoided the real problem of the psychology of hearing.

(2) The need for thousands of new organs at competitive prices in nineteenth-century Europe. There was commercial mass production of ranks of pipes to a limited number of stereotyped scales and even fewer pipe shapes. Even gemshorns were sometimes made of cylindrical shape!

(3) The production of organs in factories without reference to the acoustical environment of the instruments in their final homes. Thus, the organbuilder cut down the time which he had to spend in churches. No longer did the organ grow from its raw materials in the building in which it was to speak. All idea of organic evolution and ecological equilibrium was lost. Thus did the "factory organ", as Schweitzer calls it, replace the art works of the Renaissance and Baroque periods.

Many of the Schnitger organs contain no wooden pipes. It is easier to make and voice metal pipes than it is to make and voice those of wood; and the lead-tin alloy is better than glue-joined wood in the damp climates of the North German and Dutch districts. English tin of 95-percent purity was used for the show pipes. (German tin was not considered to be suitable for this purpose, in spite of the protests of those Germans who wished to support home industries.) Pure tin was very expensive, and in order to save the cost of the bass pipes in low pitches Schnitger had to build organs with high pitch (about three quarters of a whole tone above the present international standard pitch). Moreover, in his smaller and cheaper organs "short octaves" were supplied in the bass, in order further to save the expense of large pipes, whose use would have been rare before the days of equal-temperament tuning.

Schnitger's pipe alloys varied in composition. The principal-scaled stops often contained lead and tin in the proportion 10 to 3; and the flutes and cornets were more heavily leaded. Brass was sometimes used for the smaller reeds.

The Schnitger pipes spoke with natural initiation characteristics. No attempt was made to suppress these by nicking, nor were they made more prominent by special methods of voicing. (It may be mentioned in passing that some present-day neo-baroque enthusiasts in Europe, with more zeal than knowledge, have put down wind pressures to an extent which would have horrified Bach and Werckmeister, and have exaggerated initiation transients to such a degree as to produce an attack that would have been unacceptable to their ears.)

The scales as now given are not intended to be taken as models. Each Schnitger organ presented its own problems to its maker. Not only did the acoustical environment and size of the church determine the scaling, but there was also the problem of fitting new pipework to old. The copying of organ pipes has often less validity than the copying of the paintings of "old masters".

1. STEINKIRCHEN. (This organ is much more powerful in relation to the size of the building than are most of Schnitger's organs.)

Scales in Inches

Pedal	CC	C	c
16′ Prinzipal	(wood)	5.69	3.5
8′ Prinzipal	5.5	3.25	1.75
16′ Posaune	8.12	5.5	3.75
8′ Trompet	5.12	3.75	2.95

Hauptwerk	C	c	c^1	c^2	c^3
8′ Rohrflöte	4.35	3.25	2.19	1.19	0.69
8′ Prinzipal	5.8	3.65	1.95	1.12	0.75
4′ Octav	2.95	1.78	1.00	0.62	0.37
2′ Octav	1.82	1.04	0.65	0.35	0.28
2′ Gemshorn	2.31	1.42	1	0.65	0.49
8′ Trompet	4.72	3.37	2.44	1.84	1.56

Composition of Mixtures

Hauptwerk Sesquialter			Brustwerk Terzian	
C	19	24	17	19
c	12	17		

Hauptwerk Mixtur					
C	22	26	29	33	
c	19	22	26	29	
c^1	15	19	22	26	
c^2	15	19	22	26	26
c^3	8	12	15	19	19

Brustwerk Scharff				
C	26	29	33	
c	22	26	29	
f♯	19	22	26	
c^2	15	19	22	22
f♯	12	15	19	19

Hauptwerk Cimbel			
C	36	38	40
c	29	31	33
c^1	22	24	26
c^2	15	17	19

Pedal Rauschpfeiffe		
	19	22

Pedal Mixtur					
C	26	29	33	36	
c	22	26	29	33	36

2. Mitteln Kirchen
Scales in Inches

	C	c	c^1	c^2	c^3
8′ Principal	5.4	3.25	2.4	1.5	1
4′ Oktav	3.28	1.77	1.0	0.6	0.36
2′ Superoktav	1.76	1.08	.56	0.36	0.24
8′ Gedackt	3.5	2	1.2	0.9	0.64
1 3/5′ Tierce	1.72	1.04	0.6	0.44	0.28

Some stop lists of Schnitger's organs are now given. It is interesting to consider the compositions of the northern organists in terms of the resources which were available to the composer in these instruments.

Steinkirchen (as restored since the war)

Hauptwerk
16′ Quintadena[1]
8′ Principal
8′ Rohrflöte[1]
4′ Octav[1]
2 2/3′ Nassat[1]
2′ Octav[1]
Gemshorn
II Sesquialter
IV-VI Mixtur[1]
III Cimbel[2]
8′ Trompet
Tremuland
Werk Ventil
Manualkoppel
Cimbelstern[4]

Pedal
16′ Principal
8′ Octav
4′ Octav
2′ Nachthorn[2]
II Rauschpfeiffe
IV-V Mixtur[2]
16′ Posaune
8′ Trompet
2′ Cornet[2]
Pedalventil

Brustwerk
8′ Gedact[2]
4′ Rohrflöte
2 2/3′ Quinta[3]
2′ Spitzflöte
2′ Octav
II Terzian
III-V Scharff
8′ Krumphorn[1]
Brustventil

Manual compass 4 octaves C-c^3 (no C♯, D♯, F♯, G♯); Pedal compass 2 octaves CC - D (no CC♯, DD♯); 28 speaking stops; 3 ventils; 34 draw stops in all. Pitch (1955) approximately one semitone above standard.

1 Stops partly by Dirich Hoyer 1540.
2 Stops by P. Von Beckerath 1948.
3 Probably added in 1772.
4 Two pairs of small bells, a major and minor third apart, attached to a wheel rotated by wind. Two golden stars in the case revolve. The device was used appropriately at Christmastime.

CAPPEL

Hauptwerk
16′ Quintade
8′ Principal
8′ Hollflöit
4′ Octava
4′ Spitzflöit
3′ Nasat
2′ Gemshorn
II Rauschpfeife
V-VI Mixtur
III Zimbel
8′ Trompet

Rückpositiv
8′ Quintade
8′ Gedackt
4′ Principal
4′ Flöit
2′ Octava
1 1/2′ Sifflöit
II Sesquialtera
II Tertian
IV-VI Scharff
16′ Dulcian

Pedal
16′ Untersatz
8′ Octava
4′ Octava
2′ Nachthorn
II Rauschpfeife
IV-VI Mixtur
16′ Posaune
8′ Trompet
2′ Cornet
Manualkoppel

PELLWORM

Oberwerk
8′ Principal
8′ Gedackt
4′ Oktave
4′ Spitzflöte
3′ Nasat
2′ Oktave
II Rauschpfeife
V-VI Mixtur
8′ Trompete

Brustwerk
8′ Gedackt
4′ Waldflöte
2′ Oktave
2′ Gemshorn
II Sesquialtera
IV Scharff
8′ Dulcian

Pedal
16′ Quintade
8′ Principal
4′ Oktave
2′ Nachthorn
VI Mixtur
16′ Posaune
8′ Trompete
2′ Cornet

NORDEN, EAST FRIESLAND

The organ was restored before the war under the direction of Dr. Christhard Mahrenholz.

Hauptwerk
16′ Quintaden
8′ Principal
8′ Rohrflöte
4′ Octav
4′ Spitzflöte
3′ Quinte
3′ Nasat
2′ Octav
2′ Gemshorn
VIII Mixtur
III Zimbel
16′ Trompete

Brustwerk
8′ Gedackt
4′ Blockflöte
2′ Principal
1 1/2′ Quinte
IV Scharf
8′ Regal

Rückpositiv
8′ Prinzipal
8′ Gedackt
4′ Octav
4′ Flöte
2′ Oktav
2′ Waldflöte
VI Scharf
1′ Sifflöte
II Terzian
II Sesquialtera
8′ Dulzian

Oberwerk
8′ Hohlflöte
4′ Oktav
2′ Flachflöte
II Rauschpfeife
II Scharf
8′ Trompete
8′ Vox Humana
4′ Schalmei

Pedal
16′ Prinzipal
8′ Oktav
4′ Oktav
II Rauschpfeife
VIII Mixtur
16′ Posaune
8′ Trompete
4′ Trompete
2′ Kornett

A CHRONOLOGICAL LIST OF SCHNITGER ORGANS WITH NOTES

1. Stade, Saint Cosmae. 1669-1673; 43 stops, 3 manuals and pedal. Begun by Barend Huss, finished by Arp Schnitger with 4 stops in Hauptwerk and Brustwerk. Vincent Lübeck surveyed this work. In 1728 the organ was renewed by Reichborn of Hamburg, and in 1781-1782 by Wilhelmi of Stade. In 1864 further changes were made, of an unfortunate character. At present the organ has 41 stops and a glockenspiel, and a spring chest with 585 valves is still working.

2. Stade, Saint Wilhadi. 1673-1676; 43 stops, 3 manuals and pedal. Begun by Huss and finished by Schnitger in 1712. Damaged (almost destroyed) by lightning in 1724. New organ in 1731-1734 by Bielerfeld of Bremen.

3. Freiburg (Unterelbe). Repaired in 1676 by Schnitger (18 stops, 2 manuals and pedal). Taken down by Röver of Stade. Its fate unknown.

4. Stade, Saint Nicolai. Organ built in 1587. Repaired in 1667-1670 by Schnitger. In 1834 part of the organ, with 39 stops, was transferred to Himmelpforten near Stade by Tappe of Verden. This was rebuilt in 1892 by Röver. The original Rückpositiv was transferred to Kirchlinteln, near Verden, by Tappe.

5. Borstel (Altes Land), Saint Romanus. In 1676 Schnitger repaired the case and some of the pipes. He added a new Hauptwerk.

6. Assel (Kehdingen). Repaired by Schnitger in or after 1676. In 1859-1860 a new organ in the original case was built by Röver of Stade.

7. Scharmbeck, Near Bremen. Rebuilt about 1676 by Schnitger. About the middle of the eighteenth century a new organ was built, but the original case and some ranks of pipes were retained. At present the organ has 21 stops, 2 manuals and pedal. It has a very high pitch.

8. Bulkau (Hadeln). Rebuilt after 1676 by Schnitger (17 stops, 2 manuals and pedal). Broken up in 1912. The organbuilder E. Stammer provided a new organ in that year, and suggested that the organ which he had taken down dated from 1792. At this time an organ of Schnitger type appeared in Lagerbuch. Was this Schnitger's Bülkau organ?

9. Jork (Altes Land). Repaired after 1676 and a new pedal added by Schnitger. In 1910 a new organ was built by Faber and Greve of Salzhemmendorf. The old case was preserved but stands isolated from the new organ.

10. Hamburg, Saint Johannis. Rebuild of D. Hoyer's organ in 1679 (30 stops, 2 manuals and pedal). The organ was sold in 1816 for 600 reichthalers to Cappel (Wursten). The case is of typical Baroque style, but much of the organ is Renaissance. The organ is frequently used for recording purposes.

11. Kirchosten, Near Hamburg. Repaired in 1680.

12. Kirchwerder (Vierlande). Repaired in 1681.

13. Ludingworth (Hadeln). In 1681 Schnitger repaired the organ built in 1598 by Antonius Wilde (36 stops, 3 manuals and pedal).

14. Oederquart (Kehdingen), Saint Johannis. In 1682 Schnitger repaired an old organ of 10 stops built in 1632. In 1865 a new organ of 18 stops was built in the old Baroque case by Röver.

15. Hamburg, Saint Nicolai. A new organ built by Schnitger in 1682-1687 (67 stops, 4 manuals and pedal, 16 bellows); cost 30,350 Hamburg marks. Repaired 1701-1702 by Schnitger. Burned in 1842 in the great fire of Hamburg.

16. Neuenfelde (Altes Land). New organ by Schnitger (34 stops, 2 manuals and pedal); cost 2,900 marks, but given to the church by Schnitger because it was his own place of worship. In 1926, with the expert advice of H. H. Jahnn, it was restored by Kemper of Lübeck.

17. Schwei (Oldenburg). A new organ of 14 stops, 2 manuals and pedal pull-downs, with 3 bellows, built *circa* 1683 at a cost of 170 reichthalers. Rebuilt in 1734 by Christian Vater of Hanover. This was repaired in 1773, 1788, 1806, and 1820. A new organ, in the original case, was built in 1852 by Schmid of Oldenburg.

18. Wittmund (East Friesland). Built in 1684 (2 manuals and pedal pull-downs). In 1776 a partial rebuild by Hinr. Just Müller of Wittmund. Later some new stops were added by Schmid of Oldenburg. The organ has now 19 stops, 2 manuals and pedal. The old case was retained.

19. Elmshorn (Holstein). In 1684 Schnitger finished the organ begun by Reichborn. In 1720 the organ had 23 stops distributed between Hauptwerk, Rückpositiv, and Pedal. Does not contain much original work.

20. Zelling (East Friesland(?). Rebuilt in 1685 (2 manuals and pedal). As there is no other record of the organ, it may have been built at Sellingen, southeast of Groningen.

21. Brandenburg on the Havel. In 1686 in the Dom, the organ was constructed from parts made by the deceased builder Landrock. Nothing is left of it.

22. Altona (Reformed Church). 1686 new organ (2 manuals and pedal pull-downs). Nothing remains of this organ, for which Schnitger was not paid.

23. Norden (East Friesland), Saint Ludgeri. New organ, built 1685-1688 with 46 stops, 3 manuals and pedal, 6 bellows, at a cost of 6,012 gulden. The organ was renewed in 1928 to celebrate the fourth centenary of the Reformation in Norden. The tone is probably the most beautiful in all of Schnitger's organs.

24. Hamburg, Pesthofkirche. In 1686 Schnitger repaired a small organ which was completely displaced in 1738 by a new organ. In 1768 there was a new church and another new organ by Joachim Paul Geycke of Hamburg.

25. Hamburg, Hamburger Berg (later called Saint Pauli). Rebuild by Schnitger in 1687. Church and organ were burned by the French in 1814.

26. Steinkirchen (Altes Land). New organ in 1687 (28 stops, 2 manuals and pedal). The organ has "the sound of a cathedral organ". In 1893 new bellows were provided, and in 1908 a new "Metallgedackt", both by the builder Röver. The organ has been restored recently by Von Beckerath of Hamburg.

27. Hamburg, Saint Petri. Repaired in 1688 by Schnitger, who added "*eine herrliche* 16' *Trompete*" in 1692. Church and organ were burned in the fire of 1842.

28. Hamburg, Saint Jakobi. New organ 1688-1693 (60 stops, 4 manuals and pedal, 12 bellows), at a cost of 36,000 marks. The organ was restored by H. H. Jahnn in 1928, and before the war by Kemper of Lübeck. Although the church was severely damaged and gutted in the war, the organ was stored in a bunker. It has been rebuilt in a temporary position at the end of a roofed-in aisle.

29. Stade, Saint Pancratii (Burgkirche). In 1688-1691 Schnitger removed to this church the old Neuenfelde organ and added 2 new pedal towers and 3 new bellows. The organ of 19 stops was bought for Arbergen near Bremen, and used up in 1868 by the builder Nathanael Krusewitz of Stade.

30. Hollern (Stade). New organ in 1688. In 1850 rebuilt by Furtwangler. The present organ, of 26 stops, includes 12 old ones.

31. Mittelnkirchen (Altes Land). Schnitger rebuilt the old organ in 1688. In recent times the organ had 2 manuals, 22 stops, pedal, and glockenspiel. There were some ranks of pipes of recent date.

32. Magdeburg, Saint Johannis. New organ in 1689-1694 (62 stops, 3 manuals and pedal, 12 bellows). Cost 9,000 reichthalers. This was one of Schnitger's biggest organs. In 1870 a completely new organ of 70 stops was built in Schnitger's case by Sauer.

33. England. In 1690 Schnitger built a small organ which came to England. He was paid only half for this organ (as also for number 34). All trace of it is lost.

34. Hamburg. In 1690, a house organ (16 stops, 2 manuals) for Dr. Hinckelmann, Pastor of Saint Catherine's Church. This has been long lost.

35. Moscow. In 1691 a new organ of 16 stops, costing 600 reichthalers, for the Crown Prince of Russia, later Peter the Great.

36. Hamburg, Saint Maria-Magdalena. Schnitger repaired, in 1691, the organ built by Fritsche of Meissen (23 stops, 2 manuals and pedal) in 1629.

37. Lambte [sic]. 1688 or 1691. It is difficult to know where this was. It was probably the Abbey at Lambspringe near Kreiensen. New organ, 2 manuals and pedal. The organ was built for Herr von Guericke, the son of the Magdeburg burgomaster.

38. Groningen (Holland), Saint Martin. Schnitger repaired and extended the famous organ originally built in 1479 by the Dutch humanist Rudolf Agricola. Schnitger also added 2 new pedal towers of 32′ pipes. The organ was repaired in 1729 by his son, and in 1740 by his pupil Hinze. It was later repaired by several builders, and in 1904 tubular pneumatic action was fitted by J. Doornbos of Groningen. The organ has 3 manuals and pedal, and upwards of 50 speaking stops.

39. Delfzijl (Holland). The organ was repaired in 1691 by Schnitger. It was completely destroyed in 1814 by the French. In 1818 a new organ of 10 stops was built by N. A. Lohman.

40. Groningen, Pelster-Gasthuiskerk. Repaired in 1692 with a new pedal organ, for 327 gulden. The organ was extended in 1774 by Hinz, at a cost of 2,300 gulden; and in 1852 it was repaired by van Oeckelen. There is little old work in the present organ.

(To be continued)

DONALD WILLING

ORGAN, CHOIR
TRINITY UNIVERSITY

SAN ANTONIO, TEXAS

EIVIND GROVEN

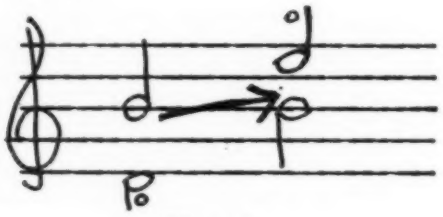
MY UNTEMPERED ORGAN

ONE of the essentials of a superior musical performance is the purest possible intonation of the intervals. Scientific investigations have established the fact that the fundamental feeling for true intonation is universal, and that it is based upon physical and mathematical laws. As we know, the absolutely pure intervals can be expressed in the simplest numerical relationships: the octave by 1:2, the fifth by 2:3, and the major third by 4:5. These three intervals form the basis of all combinations of tones employed in music we ordinarily hear. They can be increased or reduced in various ways, so that scales can be built and modulations to all keys can be accomplished.

It becomes apparent that these three numerical relationships are of such a nature that they cannot be measured by each other (are not multiples of each other). For example, one cannot add pure fifths in such a way as to arrive at a multiple of a pure octave. Neither is it possible to add and subtract pure octaves and fifths and arrive at a pure third. An example will illustrate this point:

	octave		octave		third				fifth		fifth		fifth		fifth	
F	—	F	—	F	—	A_1	F	—	C	—	G	—	D	—	A_2	
16	:	32	:	64	:	80	16	:	24	:	36	:	54	:	81	

A_1 — the third created in perfect tune above F — is a few vibrations lower than A_2, created by the succession of fifths. The difference is expressed by the ratio 80:81. This is equal to 18 milli-octaves (1/1000 octave), or 20 cents (1/1200 octave). This "comma" is an appreciable interval. The third, F - A_2 (Pythagorean major third) seems ugly and grating because it is so impure. With a violin one can easily observe this comma in the following combinations of notes:



(Figure 1)

The first finger must assume a lower position on the A string for the B to sound in tune with open D string than that which it occupies in producing a B which is in tune with the open E string. The difference is slight, but perceptible. Such comma shifts in accordance with harmonies are commonly executed by string-players unconsciously, automatically. The sensitive ear directs.

In music where the performer has a free choice of tones, as in a choir or an orchestra, many small pitch nuances will be employed, especially if the music modulates extensively. A completely true intonation in all keys would require more than fifty pitches within the octave. On a keyboard instrument with a limited number of unalterably tuned pitches, the small nuances are impossible and a single note must be

made to suffice for many that lie nearby. Various systems of tuning have been devised for keyboard instruments, but the one which finally prevailed and which we use today is the simplified division of the octave into twelve equal intervals. It was forced into practice by the development of music, not as a perfect solution of the problem, but as a compulsory compromise imposed by the difficulties involved in producing finer divisions of pitch in keyboard instruments.

We are today in the position of lacking one of the most important requisites for the highest-quality performance of keyboard music. In many instances the tempered intervals deviate so far from the pure intervals that it is very noticeable. The major third is 11 milli-octaves too high, and the minor third is 13 milli-octaves too low. The physical discrepancies between tones and overtones create beats, which more or less unconsciously tire and irritate the listener. The beats also tend to blur the musical impression in the same way that an uneven, dirty pane of glass detracts from the beauty of a landscape. The problem of finding a better solution than the present one has occupied scientists and technicians for several centuries, and especially during the last 150 years. It has been clear that the number of pitches within the octave must be increased. But it has at the same time been apparent that pitches would have to be adjusted (tempered) at certain places. Such tempering has been a prominent part of the proposals to divide the octave into 19, or 31, parts. By these systems the thirds would be kept closest to pure, while the fifths would become somewhat less pure than in the present system.

An adjustment that takes into consideration both thirds and fifths must therefore be the ideal solution. A simple computation gives the means by which this is possible: Two fifths minus an octave produces a whole step, of which the ratio is 8:9 (170 milli-octaves). An example would be F - G, obtained by going up a fifth from F to C, and another fifth from C to G, and coming down an octave, to G next to the starting note. Analogously, four such whole steps may be seen to involve eight fifths:

F - (C) - G - (D) - A - (E) - B - (F♯) - C♯

$$8 \quad : \quad 9 \quad : \quad \frac{9^2}{8} \quad : \quad \frac{9^3}{8^2} \quad : \quad \frac{9^4}{8^3}$$

The frequency ratio for the distance from C♯ to F an octave above the starting tone will be $\frac{9^4}{8^3} : 16$. This step lies very close to the pure major third, D♭ to F.

$$C♯ - F = \frac{9^4}{8^3} : 16 = 26{,}244 : 32{,}768$$

$$D♭ - F = 4 : 5 = 26{,}244 : 32{,}805$$

This "schism", D♭ - C♯, is therefore represented by 32,768 : 32,805, which is less than 2 milli-octaves. This is also demonstrated by the following computation:

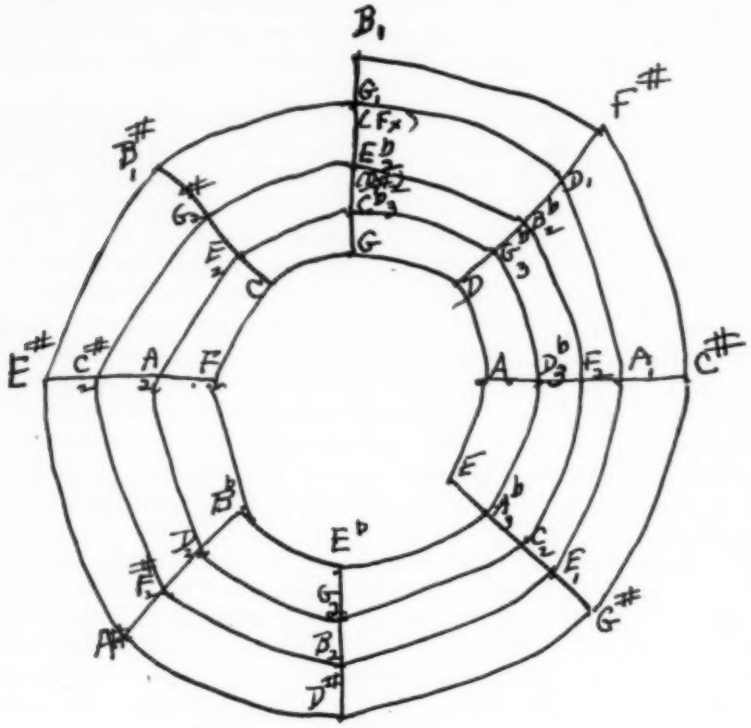
170 milli-octaves x 4 = 680 milli-octaves

C♯ - F♯ = 1000 : 680 = 320 milli-octaves

Pure third D♭ - F = 322 milli-octaves

This difference is so slight that we can without danger combine the two tones D♭ and C♯: i.e., we can keep the pitch of D♭ and divide 2 milli-octaves into 8, and substract this 1/8 schism from every fifth. Such a small discrepancy from the theoretically pure interval is impossible for the ear to detect unless a bare fifth should be sustained long enough for the ear to hear the very occasional beats. This plan provides a common multiple for the successions of thirds and fifths.

The illustration below shows how the succession of fifths has common connecting points with the succession of thirds.

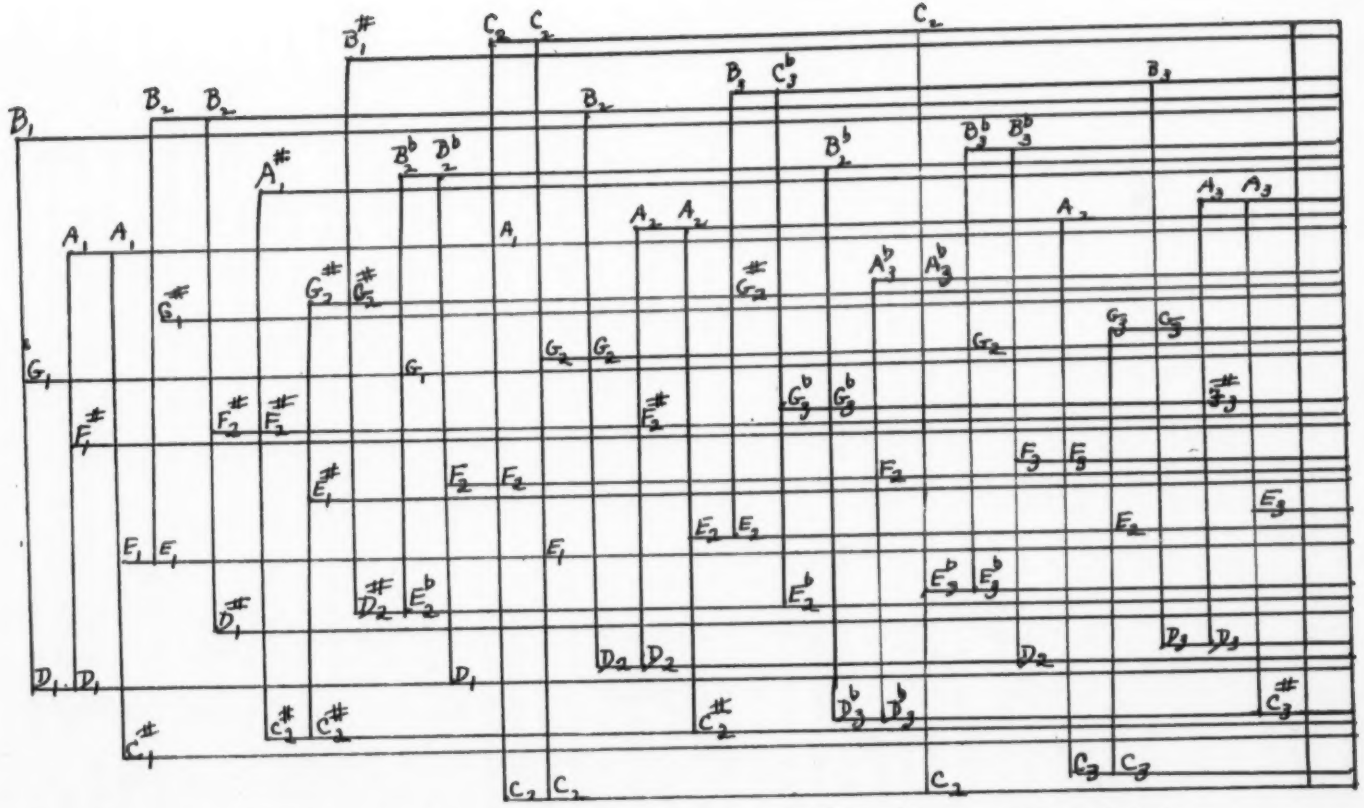


(Figure 2)

N.B. THE NUMBERS 1, 2, OR 3, WHEN WRITTEN BELOW THE LETTERS INDICATE THE THREE DIFFERENT PITCHES FOR EACH TONE.

From B_1, outermost on the spiral, we can follow the line of fifths to $B\sharp_1$. The next fifth, F^x, is identical with G_1, which is a just-tuned third below B_1. Let us proceed three fifths further to E_1. The next fifth should be B_2, which is a comma higher than B_1. Continuing along the fifth line to $G\sharp_2$, the next fifth is $D\sharp$, which is identical with $E\flat$, pure-tuned third under G; we see that new thirds are regularly created parallel to the preceding line of fifths. In all, the spiral gives 35 slightly tempered fifths, thus introducing 36 different pitches within an octave. These are enough for all keys and combinations that music can conceivably need. The drawing (Figure 3) shows how the 36 different pitches are disposed in a series of triads progressing around the fifths line.

From Figure 3 we see that $G\sharp_1$ is lower than $A\flat_3$, $D\sharp_1$ is lower than $E\flat_3$, et cetera. It is not correct to state, as do some treatises on musical theory, that $G\sharp$ is higher than $A\flat$. This idea is based upon the succession of pure-tuned fifths from, for example, $A\flat$ to $G\sharp$. If we look at the spiral (Figure 2), we can begin with the tone $G\sharp_2$, which is identical with $A\flat_2$, a fifth under $E\flat_2$. If we follow the line to E_2 and further, call the tones B_3, $F\sharp_3$, $C\sharp_3$, and $G\sharp_3$, instead of $C\flat_3$ $G\flat_3$ $D\flat_3$, and $A\flat_3$, then we see that this $G\sharp_3$ lies a comma higher than $A\flat_2$. But this is just a theoretical consideration concerned with the line of the fifths. It has little practical meaning, since it is hardly conceivable that a composition would modulate around the entire circle of fifths. If we reckon in



(Figure 3) HORIZONTAL LINES GIVE PITCHES, THREE FOR EACH TONE; E.G. $B^{\#}_{\#1}\ C_2\ C_3$. VERTICAL LINES GIVE CHORDS.

thirds it will be more satisfactory, both theoretically and in practice. If we start from $A\flat_3$ and follow the line of thirds up to C_2 and E_2 to $G\sharp_1$ this $G\sharp$ proves to be 34 milli-octaves lower than $A\flat$. An example follows:

Major Thirds: $A\flat_3 - C_2 - E_1 - G\sharp_1$

Frequency Ratio: 64 : 80 : 100 : 125

Octave Leaps: $A\flat_3 - A\flat_3 = 64 : 128$

The distance $G\sharp_1 - A\flat_3$, the so-called "little diesis", has, then, the relation of 125:128. In milli-octaves, three major thirds (3 x 322 milli-octaves) become 966 milli-octaves. Substracting this from the octave (1000 milli-octaves), the span proves to be 34 milli-octaves narrower. This difference answers, according to the "adjustment" principle, to 2 commas. In musical practice this difference can appear in innumerable situations. $G\sharp_1$ as a leading tone to A_1 in A minor must, in modulating to C_2 major and further to C_2 minor, be changed tn $A\flat_3$.

This system of just intonation was nearly discovered by Helmholtz (*Die Lehre von den Tonempfindungen*). A result of his theories is to be found in a harmonium built by Eitz in Eisleben. This has 55 tones in the octave with 55 corresponding keys, a keyboard which is obviously too difficult to manage.

It has seemed reasonable to seek a solution that would make available finer divisions of the scale, and at the same time preserve our usual keyboard. Each of the several pitches played by a single key must sound at different times, in accordance with the requirements of the harmony. Such an instrument was built by Puhlmann in Stuttgart, in 1926. It has 36 pitches within the octave and is equipped with an extra manual whose keys are in contact with the replacing mechanisms. Replacements must be made during performance, so that this arrangement places an extra burden on the player. Also, this replacing mechanism is quite slow. (It is not electric.) This instrument has therefore not much practical use in the performance of music.

In 1936, I built an untempered harmonium based on the principles of the Puhlmann harmonium. The chief difference between them is that electrical replacements are used in mine. Furthermore, these electrical replacements are controlled by an automatic replacement device that is activated by impulses coming directly from the regular manual keys. This enables the performer to play as he does on the usual organ. The just tones appear automatically during the playing.

Replacement must occur when a harmony is used that demands a pitch that is different from one that has been used in a preceding chord. Sometimes a tone that is held over from one chord to the next must be replaced, altered to conform to the correct intonation of the new chord. It might be supposed that such glides would be disturbing to the ear. This is not the case. The new tone in the same voice comes in automatically with the chord change and is easily accepted as an element of the new harmony.

Even within this just system certain more involved harmonies are not absolutely pure, nor need they be. Investigation shows that the harmonies which demand absolutely just intonation and sound impure otherwise are those which represent the lower (and distinctly audible) elements of the harmonic series, such as the major and minor triads (the latter is tolerable with a Pythagorean third under some conditions), some dominant seventh chords, major seventh chords, and chords that include two or three fifths. Augmented triads, ninth chords, and other more dissonant chords can sound well with various combinations other than strictly pure intervals. The familiar modulations in

Mozart's *Ave Verum*, from A major to F major and back again, afford examples of progressions that do not require perfectly pure intonation for a fine effect. [Has anyone ever heard them intoned perfectly by voices?—Ed.] In general, the simple, common chords (closer to the absolute concordance of the harmonic series, rather than relatively concordant) require true intonation and frequent replacements. The more extreme harmonic material — further from the conventional, traditional chords and progressions — is only relatively, rather than absolutely, concordant. Hence replacement of sustained and other tones is less frequent in modern atonal harmonies.

There will, of course, be a number of objections to the thought that in the future we shall go over to untempered keyboard instruments. For one thing, we have imagined that it is possible to drill insistently on 12 tempered intervals and become habituated to them. We have also thought that music composed under the influence of tempered instruments is dependent upon them for performance, and that even though tempered harmonizations are not ideal we are obliged to keep them on purely musical grounds.

It has been established, by measurements and other tests, that 12 tempered intervals can not be drilled into and established in the human consciousness. Investigation of the tuning of tempered pianos and organs has brought out the fact that not even first-class tuners can tune exactly equal intervals, but on the contrary they make extraordinary deviations, because the tuning must be done by judgment and not by the sure support of natural feeling, and the elimination of beats. Tuners themselves have a clear conception of the absolutely pure intervals, even though they must constantly deal with and find their way to impure intervals. When these experts in the field are unable to establish the concept of the tempered intervals so that they can find them easily, why should we imagine that composers think or feel in such intervals?

Even if composers have used tempered instruments as aids to working out a composition, it is still wrong to suppose that tempered sounds are necessary in performance. Consider, for example, performance by a string quartet, an orchestra, or an a capella chorus. Helmholtz proved, with the help of P. Thompson's enharmonic organ (London), that vocalists sing pure intervals, not tempered. Delzenne (1826) found that string-players prefer to play untempered intervals. Corni and Mereadier (Paris 1869) found that string-players use pure intervals in harmony and occasionally Pythagorean intervals in melodic passages, but almost never tempered. Hindemith says in his book *Unterweisung im Tonsatz* (1934), in reference to choice of pitch in a system which deviates by a comma, "Players of keyboard instruments are not concerned with this; the comma on their instruments is so diffused that the octave is pure, and no other interval alone bears the entire burden of the false interval. All other musicians, singers, string-players and wind-instrumentalists, play untempered." Thus we may also include the wind instruments. This agrees with my own experiments among musicians playing with the accompaniment of my untempered harmonium.

Tempering is, therefore, not a contributing factor in music, but instead a negative factor, providing imperfect means of performance. And it really only exists as a theoretical concept, while just intonation represents the precise reality of our feelings.

There can be no doubt that sooner or later music for keyboard instruments will make use of untempered tuning. The advantages of abandoning the flat, cold form of expression that is the result of the simplified division into 12 equal intervals, and of employing the wealth of nuances that are possible with untempered tuning, are obvious.

It would be highly advantageous in teaching, as well. One could feel himself to be on solid ground because the reality of tonal materials would then agree with theory, which is far from the case at present! A pure-tuned keyboard instrument with three times as many tones and an automatic electric replacement mechanism would be expensive, in comparison with a 12-tone tempered instrument. This will be raised as an objection to the adoption of untempered tuning. The answer to this objection is that nothing is too expensive when striving for perfection. I believe that we have accustomed ourselves to thinking in terms that are too limited, where music is concerned. This old-fashioned way of thinking comes from the time when music was only a step-child in our communities. If we consider what is spent today in other technical areas, on architecture, on sports, then the cost of building a pure-tuned organ becomes a mere bagatelle.

Be sure before you buy!

A pipe organ is a big purchase and an important one. One you should take time to investigate thoroughly before making.

Certainly we think you should see and play a Möller, before making a final decision. We are confident that you will be impressed by the famous Möller action, the outstandingly pure tones of its perfectly finished pipes, and the beauty of console craftmanship.

Your Möller representative will be pleased to arrange a demonstration. Call him at your earliest convenience.

M.P. MÖLLER
INCORPORATED
Renowned for Pipe Organs Since 1875
HAGERSTOWN, MARYLAND

DEPENDABLE
PIPE ORGAN PARTS and SUPPLIES
For repairing, modernizing and
enlarging pipe organs
ORGAN SUPPLY CORPORATION
540-550 E. Second St. ERIE, PENNA.
Member of the Associated Organbuilders of America

★ ★ ★ A MATTER OF RECORDS ★ ★ ★

THOMAS P. FROST

THROUGH the miracle of tape-recording, the writer has been privileged to hear the just-intonation organ of Eivind Groven in Oslo, Norway. The recorded examples include scales, triads, and modulations, as well as nine or ten compositions and various other demonstrations. All told, there is much material from which to form an impression of the sound of the untempered music.

To one not prepared for a shock, the effect of music in just intonation can be positively unnerving. A musician accustomed to equal temperament will find many of the scale tones, particularly the third and sixth, so far removed from their accustomed pitch as to seem "sour". When a scale or solo melody is played, it may appear disconcertingly out of tune. Experiment with several musical laymen indicates that they will experience the same sensation.

This, however, is only a small part of the story, for when these same notes are combined into chords, the sounds are magically consonant. The complete and unaccustomed absence of beats between the notes of a chord results in unwonted euphony; the notes all but blend into one tone. The pure richness of the untempered chords is a novel experience which we wish it were possible to share with every reader.

A striking demonstration early in the record shows three different pitches associated with one note of the keyboard. The difference in pitch is clearly perceptible, although the notes seem to be separated only by a "cat's meow". (A good approximation to the change in pitch which is involved can be obtained on most organs by playing a note on a celeste rank alone and then on the unison rank.) At a later point in the recording, in some of the modulations, enharmonic changes result in the successive sounding of two such pitches for one note. This effect is not a very happy one, evoking as it does the sensation that something has "come unhinged".

The demonstrations of various consonant intervals and of triads show how much more consonant these sounds are in just intonation than in equal temperament. The untempered chords are evidently accepted by the ear because the absence of beats proves to the ear the rightness of the constituent pitches. Thus, Grieg's richly harmonic *Ved Rondane*, sung by Mrs. Groven with just-tuned organ accompaniment, conveys a haunting beauty. (Mrs. Groven, we are informed, is able to sing these intervals because she has heard so much of the untempered music.) The effect of the other predominantly harmonic compositions is likewise satisfying: Fantasie on a folk tune, by Groven, and a folk tune arranged by Sparre Olsen, both organ solo; and Groven's arrangement of *Om Kvelden*, sung by Mrs. Groven. It should also be remarked that the melodic out-of-tuneness does not appear in the voice, with light tremolo, to nearly the degree it does in the dead-flat organ tones.

On the other hand, the contrapuntal works exhibit the peculiarities of intonation in a manner which is much less readily acceptable. The J. S. Bach "Little" Fugue in A minor appears distressingly "sour" in spots, due to the unaccustomed intonation, and the same is true of the same composer's Praeludium in D major (transcribed from the Third Partita for violin).

In accompanying an orchestral instrument, the untempered organ produces some conflicting intonations, as is demonstrated in the Händel flute sonata, yet these are seemingly minor and readily overlooked. Curiously, in this instance, the ear seems to discern a smooth consonance in the accompaniment simultaneously with the accustomed pitch in the flute. It must be that the generally more flexible pitch associated with the flute moderates the clash which would be anticipated.

The blending of tones in untempered intervals, mentioned above, illustrates the reason for untempered tuning of organ mutation ranks. Off-unisons should be tuned in just relation to the unison. Mutations which are extended from a unison rank are necessarily in tempered intonation, and as is well known, borrowed mutations are seldom successful. Such a curiosity as a tempered tierce could hardly be expected to blend in combination with other voices. This consideration brings out one reason why the common electronic organ with the "tempered harmonics" is so laden with bizarre effects.

Mention of the untempered tuning of upperwork leads to a further point of interest: a limited demonstration of the effect of untempered intervals and chords can be made from the console of any organ which is provided with a Nasard and Tierce. These ranks should be tuned a perfect fourth below the 2′ and a true major third, respectively. They will thus sound a true major sixth, which can readily be compared to a tempered major sixth played on another keyboard. With a little experiment and thought, further illustrations of other intervals and chords may be found, such as the inverted triad 5-1-3 which speaks when the 2 2/3′, 2′, 1 3/5′ ranks are drawn, or the minor third between the Tierce and Larigot.

A just-intonation organ containing mixtures would be of great interest, as would an instrument in meantone intonation. It is almost certain that the effect of just tuning would be to moderate any tendency of the mixtures to harshness. Unquestionably, in an organ with equal temperament, the discrepancy between tempered unison and untempered off-unison pitches is a prolific source of acoustic beats, and it is highly probable that these beats are offensive (whether consciously or not) to many ears. It is a well-established fact that in the classic era of organbuilding the use of meantone temperament was general. In fact, the universal adoption of equal temperament, in the first half of the nineteenth century, approximately coincides with the drastic curtailment in provision and development of upperwork in organs which occurred in that period. Is this mere coincidence, or cause and effect?

Meantone temperament, which was in use from about the beginning of the sixteenth century, has a pure effect in the keys with not more than one or two sharps or flats. The question of the more remote keys was solved in general by avoiding them. From the standpoint of equal temperament, meantone can perhaps most easily be visualized as a temperament in which the errors in the keyboard intervals are lumped into ones which will not be used, although it is technically developed on the basis of pure thirds and slightly flat fifths. Meantone temperament is not to be confused with just intonation as such, but in the best keys it is much purer than equal temperament and more nearly just.

We should not lightly dismiss the possibility of new temperaments coming into use. On the just-intonation organ, Mr. Groven is able to demonstrate a remarkable traditional scale employed in Norwegian folk songs, the "neutral scale". In this scale, the whole steps are small and the half steps large, so that it is distinctly neither major

nor minor. Repeated listening to the *Draumkvaede,* which is sung in this scale, is intriguing, and overcomes the natural first reaction that it must be extraordinarily off key.

Far from being a matter of merely theoretical interest, the question of temperament has a vital relation to the sonority of the organ and to the effect of music played upon it. As these comments are written, the writer is unaware of the principles of construction and operation of Mr. Groven's untempered organ, and has judged it from the tape-recordings only. Any practicable means of improving the temperament of organs will be a most significant advance in the art. If Mr. Groven's efforts do no more than stimulate a wider interest in the subject, they will be well worthwhile.

We are indebted to Margaret Midelfort of Eau Claire, Wisconsin, through whose kindness we were supplied with Mr. Groven's tapes and a translation of his comments.

SCHANTZ

AN ESTABLISHED NAME

A PROGRESSIVE ORGANIZATION

ESTABLISHED 1873

Schantz Organ Company

ORRVILLE, OHIO

MEMBER ASSOCIATED ORGANBUILDERS OF AMERICA

For the Organ by

FRANK CAMPBELL - WATSON

Praeludium No. I
"Rorate Caeli"

Praeludium No. II
"Puer natus est nobis"

Price 60c each in U.S.A.

M. WITMARK & SONS
619 West 54th Street
New York 19, N. Y.

★ ★ ★ BUSMAN ★ ★ ★

RECENTLY a bishop of the church entertained an audience deep in the heart of Texas by regaling them with items from a book he intends to write entitled "Organists I Have Known". It was very amusing. We venture to say that we could write one entitled "Bishops I Have Known" that would be at least equally amusing. One subject of his witticism was an organist who was a "perfectionist" and who, he said, made the mistake of demanding too much of his choir, failing to realize that human nature is imperfect.

On the other hand, the Rev. Leonard Duchars, in an address delivered to the Isle of Man Organists' Association and quoted in the April 1955 issue of the *Quarterly Record of the Incorporated Association of Organists*, said: "Church music should never be shoddy, shabby, or cheap. Since it is our offering to God it should be the best of which we are capable. It must be confessed that some of the music offered to God in our churches is *not* worthy — even though the congregation likes it." The Rev. Mr. Duchars may never become a bishop, but we like his point of view. Elsewhere in the same address he mentions an arrangement that once prevailed in some churches whereby music was allowed only at the beginning or end of divine worship, so that worshipers "could either remain in the vestry till the music was over, or leave at the end of the service proper".

Several times lately we have had reason to feel that this arrangement would be advantageous in rural New England areas, where our Texas bishop's easygoing philosophy seems to dominate church music. While it is an indisputable fact that human beings, all of us, are imperfect, is it not peculiar, to say the least, that church services should be made the occasion for *public display* of our imperfection? On secular occasions all reasonable efforts are made to introduce as much quality as possible into any kind of public performance. Performances of music under secular auspices do approach perfection, and they are usually not attempted under circumstances that preclude the possibility of at least some quality. This cannot be said of some church music, and comparison with superior secular performances is inevitable. Why should the church insist on a weekly public exhibition of human inadequacy? Sometimes it is torture to the listeners and degrading to the performers, some of whom must realize their shortcomings.

In some places it might be better if the choir's function were limited to leading the congregation in hymn singing, without attempting to sing choral music by themselves.

In addition to inappropriate and ill-chosen selections, the voices are often untrained, unmatched, unbalanced, uncoordinated, and unsteady, and the sounds they produce are unedifying. The worst feature of all, of course, is that curse of church choirs, excessive vibrato. The agitated quivering and trembling of voices in choirs can only be likened to cerebral palsy. It creates the effect of complete turmoil and confusion, at a time when worshipers are earnestly seeking the calmness and serenity of a divinely ordered world. It would seem to us to be no more unreasonable if, at a predetermined time in the service, all the women singers should start to "shimmy", and all the men to visibly shiver and shake, like Saint Vitus! At any rate, listening to such singing does not increase one's pride in the human race.

Organs, too, suffer from the same disease. Even the very best organ tremolo, which is rare in these parts, is a crude device, and not to be compared with the normal vibrato heard in well-produced voices and in the tone of stringed instruments. This desirable characteristic of violin and vocal tone is not a constant motion, but only becomes active after the start of each individual sustained tone. The organ tremolo vibrates continuously and the notes are fitted on to it, beginning at any point in its phase. Further, when instruments play together in harmony each instrument is played with its own long and short notes, and with an independent vibrato. The several vibrati are not usually synchronized. The organ tremolo shakes everything at once.

When these natural limitations of a mechanical tremolo are combined with the common faults of a too-fast, too-slow, or too-powerful beat, there can be no enjoyment, no uplifting quality, in organ music.

Last, but not least, is the unpleasant sound of many organs. Although bad acoustics and bad voicing are important factors, bad stop lists and bad registration are also to blame. The loud batteries of 8′ Diapasons, Tubas, and Cornopeans, devoid of any harmonic development and musical interest, assail the human ear with their crude boldness. The attempt to make music with them is like trying to teach an elephant to do a graceful swan dive from the high board; it falls heavily. The overpowering leaden weight of the sound is simply not a suitable substance with which to make music. Any forte or fortissimo tone that is wholly or even predominantly foundational is an aberration; it is contrary to the logic of all music. Tones of other instruments increase in brilliance with each increase in volume — i. e., the volume is increased mainly by strengthening the overtones, so that at forte or fortissimo the greater part of the total intensity of sound is distributed among elements of the harmonic series *above* the fundamental. In other words, at fortissimo all other instruments have a full complement of mixtures drawn. Only pianissimo tones are predominantly fundamental (all 8′). To produce a fortissimo with pianissimo quality is the equivalent of magnifying, by electronic means, the "smooth" pianissimo tone of the French Horn to match the fortissimo volume of the full orchestra.

The organ world fell into this absurd fallacy when the improved blowing mechanism provided a copious wind supply for an unlimited number of large (8′) pipes, and experimental voicing with high pressure permitted the production of loud tones from single pipes. Although these developments clearly exceeded the natural limitations of our instrument, such sounds are, unfortunately, still heard in some rural and provincial churches. Their effect may be said to be that of music inhibitors, as no music can come to life and touch the human heart in their presence.

In summary, there is much crudeness in church music. It is our responsibility to refine and eliminate it. Organbuilders and organists, choir members and choirmasters, should constantly strive for perfection, in order to achieve the highest standards of which they are capable. The church should not be made to appear ridiculous through its music, whether because of the "imperfection" of human nature or for some other reason.

CONTEST

First Prize: Won by Miss Margaret Weber, of Sylvania, Ohio, with answers that were 100 percent correct.

Second Prize: Won by Robert T. Anderson, of Bloomington, Illinois, with answers that were correct except that he failed to notice that the quotation of the subject of the Great G minor Fugue was not from the beginning.

Third Prize: Won by Arthur Croley, of Nashville, Tennessee, with answers that were all correct but one; he missed the excerpt from the Sweelinck Variations, but cited another theme which, except for the barring, is identical for the first twenty notes.

—— :: — :: — :: ——

CONTEST ANSWERS

Themes are at beginning of work or movement unless otherwise specified.

1. Bach, Prelude in G minor, Eight Short Preludes and Fugues.
2. Bach, "If Thou But Suffer God to Guide Thee", Schubler Chorale Preludes, number three.
3. Franck, Chorale in B minor, number two.
4. Mozart, Piano Concerto in D minor, K. 466, second movement, Romanza.
5. Buxtehude, Passacaglia in D minor, measure 32.
6. Bach, "O Spotless Lamb of God", measure 113, Great Eighteen Chorale Preludes, number six.
7. Hindemith, Sonata I, second movement.
8. Bach, "Wake a Voice Is Calling", Schubler Chorale Preludes, number one.
9. Widor, Symphony V, first movement, measure 158.
10. Bach, Fugue in G minor, beginning last note in measure 21, Fantasia and Fugue in G minor.
11. Bach, Fugue in A minor, measure 131, Great Prelude and Fugue in A minor.
12. Haydn, String Quartet in F, opus 3, number 5, beginning last note in measure 41.
13. Bach, "We All Believe In One God", (Giant Fugues), from Volume III of the Keyboard Exercise.
14. Lubeck, Fugue in E, Prelude and Fugue in E.
15. Franck, Chorale in A minor, number three, measure 22.
16. Vaughan-Williams, Chorale Prelude on "Rhosymedre".
17. Brahms, Chorale Prelude "Deck Thyself My Soul With Gladness".
18. Beethoven, Symphony VII, third movement, measure 149 or 165.
19. Mendelssohn, Sonata II, final movement.
20. Bach, Prelude in C, Eight Short Preludes and Fugues.
21. Sowerby, Symphony, final movement.
22. Bach, Fugue in E flat, measure 99.
23. Bach, Fugue in F, Eight Short Preludes and Fugues.
24. Buxtehude, Prelude and Fugue in G minor, measure 74.
25. Brahms, Chorale Prelude "Lo, How A Rose E'er Blooming", beginning last note in measure 4.
26. Buxtehude, Prelude, Fugue and Chaconnne in C, measure 12.
27. Thomas, de Santa Maria, Cadence on the Eighth Tone.
28. Mozart, Fantasia in F minor for mechanical clock, K. 608, measure 13.
29. Beethoven, Piano Concerto number V (Emperor), second movement.
30. Bach, Prelude in B minor, measure 69, Prelude and Fugue in B minor.
31. Mendelssohn, Violin Concerto, second movement, measure 9.
32. Pachelbel, Chaconne, Prelude, Fugue and Chaconne in D minor.
33. Barber, Adagio for Strings.
34. Sweelinck, Variations on "My Young Life", variation three.
35. Mozart, String Quartet in E flat, K. 428., first movement.
36. Bach, Prelude in G, measure 12, Great Prelude and Fugue in G.
37. Bach, Passacaglia in C minor.
38. Bach, Prelude in F minor, measure 73, Prelude and Fugue in F minor.
39. Haydn, Symphony number 99, in E flat, second movement, measure 27.
40. Franck, Chorale in E, number one, measure 106.
41. Bach, "Come Redeemer Of Our Race", measure 33, Great Eighteen Chorale Preludes, number nine.
42. Beethoven, Piano Concerto IV, first movement.
43. Dupre, Fugue in G minor.
44. Vierne, Symphony I, final movement, measure 49.
45. Reger, Benedictus, beginning last note of measure 24.
46. Messiaen, L'Ascension, part IV.
47. Brahms, Variations on a Theme of Haydn, Finale.
48. Bach, "From God I Will Not Turn", measure 27, Great Eighteen Chorale Preludes, number eight.
50. Bach, Fugue a la Gigue.

For Sale...

Austin	2	3	4-Manuals.
Estey	2	3	4-Manuals.
Kimball	2	3	4-Manuals.
Möller	2	3	4-Manuals.
Skinner	2	3	4-Manuals.

These instruments will be custom rebuilt and tonally redesigned to meet your requirements. Completely restored and guaranteed as new.

Communicate with us at your earliest convenience for 1955 delivery.

CANNARSA ORGAN COMPANY

Hollidaysburg, Pa.

"Those who know buy Pipe Organs"

Organ Music

of all periods and schools available for immediate delivery "on approval" if you wish.

We have made a specialty of supplying **Organ Institute** repertoire requirements every year since the founding of the **Organ Institute** in 1947.

Charles W. Homeyer & Co., Inc.

498 BOYLSTON STREET
BOSTON, MASSACHUSETTS

JUILLIARD SCHOOL OF MUSIC

Complete Training for the Church Musician
Diploma, Postgraduate Diploma, Bachelor of Science Degree, Master of Science Degree, Special Studies
Vernon de Tar, Organ and Church Music
Lilian Carpenter, Organ
Bronson Ragan, Organ and Keyboard Courses

Catalog on Request
120 CLAREMONT AVENUE
NEW YORK 27, NEW YORK

SCHOOL OF SACRED MUSIC
UNION THEOLOGICAL SEMINARY

HUGH PORTER, Director
CLARENCE DICKINSON, Director Emeritus

Courses leading to the degrees of
Master of Sacred Music
Doctor of Sacred Music

BROADWAY AT 120th STREET
NEW YORK 27, N. Y.

Westminster Choir College

Princeton, New Jersey

J. F. Williamson - President

A. McCurdy - Head Organ Dept.

WHAT HAVE YOU TO OFFER?

If it has real merit, then (and then only) bring it to the favorable attention of the organ profession by advertising in the

QUARTERLY.

AUSTIN

SCIENCE AIDS ART

OFFICE and FACTORY

HARTFORD, CONNECTICUT

FREDERIC B. AUSTIN
President

PERCIVAL STARK
Vice President

RICHARD J. PIPER
Tonal Director

BECOME AN ASSOCIATE OF THE ORGAN INSTITUTE

and help a young organist to develop his talents.

The Organ Institute is a nonprofit corporation and respectfully solicits contributions to its scholarship fund. Every year several talented young musicians are enabled to attend the Organ Institute Summer Sessions by means of scholarship grants. The need for increasing the funds available for this purpose is acute. Any contribution, large or small, will be welcomed, and may be deducted from income on Federal Income Tax returns.

ORGAN INSTITUTE, INC.
Box 50, Andover, Massachusetts

Ruth Barrett **Phelps**

A.A.G.O.

MARION HUTCHINSON,
F.A.G.O.
MacPhail College of Music
Central Lutheran Church
MINNEAPOLIS, MINN.

LEWIS JONES A.C.C.O.
Graduate Royal Conservatory, Toronto
St. Paul St. United Church
ST. CATHARINES ONTARIO CANADA

ENID LINDBORG, A.A.G.O.
Organist—Director
Kountze Memorial Lutheran Church
OMAHA, NEBRASKA
Teacher of Piano and Organ

WILLIAM GERALD WHITE
M. Mus., F.A.G.O.
St. Luke's Church (Episcopal)
EAST GREENWICH, R. I.
Recitals and Instruction
Coaching:
Guild Tests, A.A.G.O., F.A.G.O.

UNIVERSITY OF COLORADO COLLEGE OF MUSIC
Offering B. Mus., M. Mus. in organ and church music.
Everett Jay Hilty, Division Head

MILDRED HENDRIX
ORGANIST, DUKE UNIVERSITY
Recitals

---

r a y berry
pedagogy in organ
the fort st church
fort and 3 sts
detroit 26

ROBERT KEINE
Organist - Choirmaster
HOLY TRINITY
MENLO PARK, CALIFORNIA

ANNA SHOREMOUNT RAYBURN
RAY B. RAYBURN
Organ — Composition
c/o INGA WANK, R.K.O. 608 N.Y.C.

CLARENCE DICKINSON
Recital-Organist
The Brick Presbyterian Church and Union Theological Seminary
Residence: 7 Gracie Square, New York 28

VIRGINIA BLAIR LOWRANCE
Organist — Director
Burkhead Methodist Church
Temple Emanuel
WINSTON-SALEM, NORTH CAROLINA

LAWRENCE I. PHELPS
ORGAN ARCHITECT AND CONSULTANT
11 NORWAY STREET
BOSTON, MASSACHUSETTS

ADVERTISING RATES

	Single Insertion	Annual
PAGE	$120.	$400.
1/2 PAGE	65.	240.
1/4 PAGE	35.	120.
1/8 PAGE	20.	75.
1/16 PAGE	10.	35.
Professional Card, Special Annual Rate		25.

ORGAN INSTITUTE

SUMMER SESSION

August 1 - 20, 1955

—●—

CONCERTS

—●—

August 5:	ARTHUR HOWES
August 6, 12:	CATHARINE CROZIER
August 13, 19, 20:	FINN VIDERO

—●—

ANDOVER, MASSACHUSETTS